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ABSTRACT

The aims of this conference were to promote information literacy as a means of personal and national advancement in today's information-dependent society; to emphasize information literacy as an essential competency for lifelong learning; to ensure that all delegates understand information literacy and its importance for the economic and social well being of their community; to develop cross sectoral cooperation in promoting information literacy; to establish a broad-based national coalition for information literacy; and to identify the agenda for change needed across education and information sectors to raise the level of information literacy. The following papers are included: (1) "Information Literacy: What's It All About" (Patricia Senn Breivik); (2) "Information Literacy: Why Worry?" (Rodney Cavalier); (3) "What's the Government Saying?" (Anne Hazell); (4) "The Learning Society" (Philip Candy); (5) "Establishing the Agenda for Change" (Richard Owen); and (6) "What Can We Learn from the US Experience?" (Patricia Senn Breivik). Also included are the proceedings of 16 workshops and 76 recommendations from the workshops which provide the agenda for action on issues relating to information literacy in Australia. These recommendations address social justice, staff development, preservice training, research, partnerships and networks, economic development, advocacy, curriculum/methodology change, and supporting informal learning. Most of the papers contain references. (JLB)

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INFORMATION LITERACY
THE AUSTRALIAN AGENDA

Proceedings of a conference conducted by the
University of South Australia Library

held at Adelaide College of TAFE
2 - 4 December 1992

'To be information literate a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information'
Patricia Senn Breivik

'At a college of quality there is a wide range of learning resources that enrich and extend... instruction and encourage students to become independent, selfdirected learners'
Ernest Boyer

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INFORMATION LITERACY
THE AUSTRALIAN AGENDA

Proceedings of a conference conducted by the
University of South Australia Library

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Convener ***Irene Doskatsch***

Editor

Di Booker

Adelaide

University of South Australia Library

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Pictured- Keynote speaker Dr. Patricia Senn Breivik with University of South Australia Vice Chancellor Professor David Robinson.

Acknowledgements

I am most grateful to everyone who physically and intellectually contributed to the success of the Conference.

I am especially thankful to

- Patricia Senn Breivik for travelling so far to share with us her experiences in placing Information Literacy on the American agenda, and for her kind words of encouragement
- Philip Candy for his stimulating and informative address
- Members of the South Australian Forum for Information Literacy Committee (Richard Owen, Anne Hazell, Chris Awcock, Di Booker and Laura Cram) for investing so much time in planning the program and being so generous with their advice and support
- David Robinson, Vice Chancellor of the University of South Australia for opening the Conference
- Alan Bundy for being such a valuable critical friend and for asking me to convene the Conference

Irene Doskatsch
Conference Convener

Editor's note

The papers in these Proceedings reflect the order in which they were presented during the Conference. Many of the workshops were working sessions facilitated by the presenter and where formal papers were not available for publication, notes and comments of the session have been included.

The outcome of each workshop session was a set of recommendations, listed at the end of the workshop paper or comments. The final outcome of the Conference was an agreement that the summation of these recommendations provides the agenda for action on issues relating to Information Literacy in Australia.

The initiative for the Conference came from Alan Bundy and the University of South Australia Library. The addition of members of the South Australian Forum for Information Literacy (SAFIL), providing representation of the compulsory education and TAFE sectors, to the program planning committee resulted in a conference program which truly represented all interests of education, business and industry, public libraries, and community information providers.

These Proceedings and the recommendations for action reflect the growing awareness of the importance that the acquisition of Information Literacy has for the personal, educational and vocational wellbeing of individuals and therefore the social and economic future of Australia. These Proceedings also provide an avenue for the promotion of Information Literacy in the community.

Information about SAFIL and its publication *InformSA* may be obtained from Richard Owen or Di Booker, Adelaide Institute of Vocational Education GPO Box 1872 Adelaide SA 5001 or Alan Bundy or Irene Doskatsch at the University of South Australia Holbrooks Road Underdale SA 5032.

Di Booker
May 1993

CONFERENCE AIMS

- to promote information literacy as a means of personal and national advancement in today's information dependent society
- to emphasise information literacy as an essential competency for lifelong learning
- to ensure that all delegates understand information literacy and its importance for the economic and social well being of their community
- to develop cross sectoral cooperation in promoting information literacy
- to establish a broad based national coalition for information literacy
- to identify the agenda for change needed across the education and information sectors to raise the level of information literacy

Contents

Foreword 1
Richard Owen

Welcome: Responding to our information abundant environment 2
Alan Bundy

Opening address 4
David Robinson

Information Literacy: what's it all about 6
Patricia Senn Breivik

Information Literacy: why worry? 19
Rodney Cavalier

What's the government saying? 28
Anne Hazell

What's happening — Panel session
Schools *Paul Lupton* 38
Higher education *Gerry Mullins* 42
TAFE *Chris Harrison* 46
Public libraries *Jenny Cram* 50
Workplace education *Robert Bean* 54
Industry/business *Marilyn Harlow* 58

The learning society 60
Philip Candy

Workshops
- Integrating information literacy into teacher education 78
  Kym Adey
- Media literacy and social justice 82
  Barbara Biggins
- Skilling the workforce 84
  Margaret Carruthers
- Industry and information — a fundamental connection 87
  Robert Cother
- Between communications and citizenship — the critical role of the public library in information literacy 88
  Jenny Cram
- Supporting a competency based training curriculum — the library's role 94
  Anne Floyd and *Robert Burnheim*
- You're working harder...but are you working smarter? 99
  Jan Gaebler and *Ray Price*
- Implementing information literacy programs in a school environment 100
  Sandra Gapper and *Judy Styles*
- Information needs of business — the provider/consumer partnership 108
  Marilyn Harlow and *Jill Miller*

- Open and flexible learning: information literacy as a key competency 110
  Chris Harrison
- The continuum of information literacy between TAFE, school, and higher education: development of an agenda 121
  Fran Hegarty, Bea Donkin, Erika Dunstan and *Rose Humphries*
- Information illiteracy — barriers to successful education 124
  Christine Jessup
- Information literacy — changing roles for information professionals 126
  Joyce Kirk and *Ross Todd*
- Course design and delivery: librarians and teacher librarians working with educators to maximise information literacy skills for students 136
  Paul Lupton
- MFP or MFP — the 2020 vision of information services 139
  Philippa Middleton
- Decisions are only as good as the information on which they are based 142
  Janice Nitschke, Susan Arthur, Carolyn Gerhardy and Ursula Hickey

Establishing the agenda for change 149
Richard Owen

What can we learn from the US experience? 155
Patricia Senn Breivik

Final recommendations for action 166

About the contributors 174

Participants 181

Program 185

FOREWORD

Richard Owen

Chair, South Australian Forum for Information Literacy

The Conference had six main aims

- to promote information literacy as a means of personal and national advancement in today's information dependent society
- to emphasise information literacy as an essential competency for lifelong learning
- to ensure that all delegates understand information literacy and its importance for the economic and social well being of their community
- to develop cross sectoral cooperation in promoting information literacy
- to establish a broad based national coalition for information literacy
- to identify the agenda for change needed across the education and information sectors to raise the level of information literacy

The Conference was structured to be a working conference, although it was obvious from the first day that there were many participants, and plenary speakers, for whom the Conference was an opportunity, maybe even their first serious opportunity, to learn about information literacy.

The two keynote speakers, Dr Patricia Senn Breivik and Professor Philip Candy were extremely well received, their presentations and other contributions being seminal to the success of the Conference.

Delegates came from all of the education and librarianship sectors with a predominance from universities (65) and schools (34), but with a strong contingent from the vocational education sector (26). All states were represented with an understandably strong contingent from South Australia (128) and significant numbers from Victoria, New South Wales, Queensland and the ACT.

The launch of the South Australian Forum for Information Literacy (SAFIL) provided an effective conclusion to the Conference. Two of the major outcomes of the Conference were the establishment of a network of 'corresponding' members who were keen to keep in touch with SAFIL, and the identification of key contacts for the establishment of state forums and a national forum.

Whilst the success of this Conference can only ultimately be measured by the changes it will help initiate, a reading of the recommendations shows it achieved its original aims.

The impact of the Conference will continue to be felt as people become more aware of the need for information literacy skills, and the obvious connection between these skills and the ability to learn effectively lifelong.

These Proceedings will make available the activities and outcomes of the Conference to a wide audience.The real success however will be measured by the extent to which these issues are taken far beyond the 'ivory towers' of education and librarianship to influence and impact on our community generally, for business people, bureaucrats and politicians to become familiar with information literacy as *the* key competency for individual and societal development in Australia.

Therein lies our challenge!

WELCOME: RESPONDING TO OUR INFORMATION ABUNDANT ENVIRONMENT

Alan Bundy
University Librarian University of South Australia

As University Librarian I welcome you to this, the second of the University Library's national annual conferences. This conference owes most of course to the organiser Irene Doskatsch, but also to a dedicated and hardworking Program Committee. Membership of the Committee has been substantially shared with the steering committee for Australia's first organisation to promote Information Literacy, the South Australian Forum for Information Literacy of which the President is Richard Owen from Adelaide College of Technical and Further Education.

This conference derives from my long standing concern about the inadequacies of the education paradigm which dominates higher education, technical and further education and to a lesser extent now, primary and secondary education. That paradigm is best stated in the following quotation from Illich and Freire

> Education is not neutral. Its purpose can be either to domesticate or to liberate. Education domesticates where knowledge is given to or deposited into learners where the relationship between educator and learner is that of subject to object

The reason why that still prevalent paradigm can never respond to the clever country agenda has been described in numerous reports during the past two years, including the Australian Senate's report *Priorities for reform in higher education* which concluded 'the rate of growth of knowledge... is such that the curriculum will always be behind... a better approach would be to teach students how to learn...'

It can be argued that higher education in Australia, certainly at the undergraduate level, is essentially of the domesticated variety and that it does little to develop a base for lifelong learning and capacity to respond to rapid change in what Patricia Breivik has described as our 'information abundant environment'. There is a whole range of personnel, institutional and psychological reasons why this is so, and it is a cycle which can only be really broken if there is a systematic change in teacher education in this country; because teachers are, by and large, still being prepared to teach rather than facilitate learning.

In the meantime, librarians more than perhaps other educators, continue to experience at grassroots level the unsatisfactory outcomes of academic programs which assume that students by some process of osmosis are information literate. As the Professor of Education at the University of Queensland, Ernest Roe, pointed out in a library specific context many years ago

> In general, 'promoting the efficient use' of resources has been nobody's business. Even where there has been active concern, significant gaps persist. A teacher may urge his students to use the library resources, provide book lists, set work which effectively directs them to the library, but takes no interest how they use the resources he is so keen for them to use, or in whether they have the necessary skills to do so... A librarian may be actively involved in helping, in actually training, users to be skilful in search strategies, be most eager that the resources are in every sense accessible to students; but regard what students do with the 'right' book when they have located it as none of (their) business...

On a recent study tour of the United States I went to Towson University in Maryland and met our keynote speaker Patricia Senn Breivik, principally to discuss the relationship between academic libraries and computer centres. Despite the scepticism about overseas trips, mine proved to be an excellent investment for the University. It proved to be excellent because the more Patricia and I spoke the more I realised that we had to initiate in Australia, as she has in the United States, a systematic way of addressing the issue of information literacy, if ever the vast amounts of money poured into education at all levels are to really foster a clever and better Australia.

Generally, we in Australia, are still insensitive to, are sloppy in the use of, or are simply inefficient in the investment in and use of the wealth of information resources available to us; in education; in business; in industry; in research and development; and personally. There has been little adjustment to the reality that the most significant change in society during the past 30 years is that it is now information abundant; but that many people lack awareness of the skills for empowerment to use that abundance well. We just cannot afford for this to continue, and in changing the national mindset and the practice, Australia's universities have to set the change agenda by examining their own education paradigm and the quality of what results from it.

It is thus particularly appropriate that our new Vice Chancellor Professor David Robinson, who is leading an institution which is addressing directly the issue of quality in higher education, has agreed to address us and formally launch us on our way for the next three days.

OPENING ADDRESS

Professor David Robinson

Vice Chancellor University of South Australia

If literacy is more than the ability to read and write and to quote Dr Breivik, it is more appropriately defined as 'the ability of individuals to find, read and evaluate the information needed to function as productive members of society', then in our 'information ever more abundant environment', it is hardly surprising that literacy, broadly defined, has become a matter of some importance to governments, to employers and to educators.

The report last week of the Australian Education Council Review Committee, the Mayer report, was informed by the broader concept which, as Dr Breivik stresses, should support 'all the various literacies; cultural and technical, inherent in the information age'. The Mayer Committee, as you know, set out some essentials that ideally should be accomplished by all in preparation for employment including

collecting, analysing and organising information
communicating ideas
planning and organising activities
working with others in teams
using mathematical ideas and techniques
solving problems, and
using technology

It is clear that these cannot be gained unless Australians have well developed information literacy skills. And it goes without saying that the education sector then has a pivotal role in assisting students, through resource based learning, not merely to develop the so called competencies but to become independent learners well able to maintain and enhance them throughout their lives.

The Victorian and South Australian Certificates of Education curricula are heavily oriented toward this resource based learning. Students are encouraged to seek widely for current information beyond prescribed texts. From the results of a survey of Melbourne University students last year, Dr Craig McInnes concluded that '...it is fair to say that the Victorian Certificate of Education students have better research skills because there is a greater emphasis on independent work at year 12...' and, as we know research is just another word for finding out — a key component of information literacy.

The Higher Education Council recently advised that 'All university graduates, irrespective of discipline, should be computer literate from now on.' This is an understandable response to the general worry about how best we can prepare citizens for the increasingly technological world in which we must all function. It also echoes employers' calls for graduates with a wider base of generic skills.

Employer bodies are fully aware of the short half life of professional and technical knowledge. Reports from the Business and Higher Education Round Table have emphasised the need for graduates to have, and for higher education courses to develop explicitly, generic qualities which will serve well graduates over their working lives as they have to adapt to technical change, handle an 'information over abundant environment' and work effectively with others.

Critical thinking, intellectual curiosity, problem solving, logical and independent thought, and effective communication are all highlighted as they are in the Higher Education Council's recent report *Achieving quality of higher education.* And rightly so. But, of course, there is nothing new in all this. The current and understandable concern with these generic qualities is merely a rediscovery, a rephrasing, of what has always represented the central task of all quality education: to enable students to learn how to learn and to become educated people in order to serve effectively their discipline, their profession, their country and humankind.

The mission of the University of South Australia is

> to advance, disseminate and preserve knowledge through the provision of a teaching, learning and research environment which fosters excellence in scholarship, innovation and social responsibility

The importance of learning is emphasised in our first two major goals

- to provide educational programs of high quality which are responsive to the needs of students
- to provide educational programs of high quality which meet the needs of government, industry, commerce, the professions, and other community groups

To achieve these goals is everybody's business, stimulated and supported by our Librarian and his colleagues and by our new Centre for University Teaching and Learning. It means not least producing students who are highly information literate, who are thus enabled — empowered — to develop further as individuals certainly, but more importantly as lifelong contributors to society.

This is critical for the Australian agenda. As Simon Crean said

> Having and using knowledge will determine how well nations adapt, survive and prosper in a global environment characterised by accelerating change and increasing uncertainty — economically, environmentally and socially

The next three days provide an opportunity to explore further the nature, development and the ramifications of information literacy.

I would like to congratulate, and on your behalf thank, the University Library, the convener and Richard Owen and the members of the newly established South Australian Forum for Information Literacy and all others involved in mounting this conference on Information Literacy: the Australian Agenda, which I am delighted to open.

INFORMATION LITERACY: WHAT'S IT ALL ABOUT

Patricia Senn Breivik
Founding Chairperson National Forum on Information Literacy

Edited from a transcript of the opening address

Introduction
I must start by saying that I feel I am bringing coals to Newcastle. Once it became clear that I would be coming here I started to read the Australian literature on resource based learning, lifelong learning and information literacy. Many of the authors I have read are here — Philip Candy, Anne Hazell and Joyce Kirk. I am very jealous of the number of publications you have from your government that talk about the major issues, realising in fact, that we *are* in an information age and it *should* have something to do with how we are doing business these days. I should show the United States government how far ahead Australia is, because you know there are always the 'haves' and the 'havenots'. I would like to begin with a comment — appropriately — from the report *Australia as an information society: the role of parliament in an age of executive dominance*

> ...much committee work is now of a general research nature, similar to that carried out by academic and other government agencies. The executive, thanks to the government bureaucracy, is information rich and increasingly powerful. In comparison, parliament is information poor. There appears to be a massive information flow, judging from the amount of paper which pours into members' offices, but public documents can conceal as much as they reveal. The ever swelling flood of information may cause confusion and despair, rather than enlightenment in a parliament[1]

That is what we are here to talk about today.

I would like to start with some very personal stories. It is very important that we realise that we are talking about the quality of individual people's lives. We can be as academic and as erudite as we like, but what is important is people. I first became interested in this field many years ago, before any of us had thought of information literacy, or the term, during the ten years it took me to get my Bachelor of Arts. I worked in a branch library of New York Public Library on the low east-side. That was where in the 1800s, the waves of immigrants had come into the States through Ellis Island. This public library had black and white photograph after black and white photograph of immigrant children, lining up literally for blocks, waiting for the doors of the library to open. It illustrated a need for access to information and epitomised everything that their parents had sacrificed and left behind, everything that they had had in their home countries, to make a better life for their children. If you have grown up in a family where it is taken for granted that you will go to university, then that does not mean as much. But I am the first generation in my family, along with my sisters, to go to college.

A number of years later I decided, remembering back to that library experience, that I wanted to become a librarian. I wanted to have something to do with what happened in children's lives. My first professional job was what you would call a teacher librarian. And those children I met were wonderful. The Jewish children were orthodox, the Chinese girls of those days were so shy, they could not tell you what they wanted. They would look at you with enormous brown eyes, and you had to guess. And that was a very powerful draw to me. I only lasted six months. I was not strong enough to deal with small children — I had to move to a much easier job at a university as a reference librarian. But I will say I am a great hallowe'en witch and can scare little sixth grade boys significantly!

When I decided to switch to university librarianship I went to Brooklyn College. A decision had been made that the New York City universities would implement an open admissions policy, which meant that anybody with a high school diploma or an equivalency exam they had passed, would be allowed into these very fine universities. The decision was made in May that the policy would go into effect in September. And, of course, no one was ready for it. The City University was a university in name only as there was no cooperation among the campuses. Every campus scrambled to do what it could. Picture the reference desk on the first floor of this huge university library and the students started coming in — I knew there had been an assignment. Reference librarians know when students come in making strange noises, and in large quantities, that somebody has set an assignment. And I could not figure out what it was. So I finally said that as they were going to be given a tour of the library on Thursday morning, why didn't they wait till after that. But... no, no no, the library assignments were due before that, they had to do their library sums. And again, your heart went out to these students. There was this interesting mixture of hope and despair. They knew that a semester earlier, they would not have been allowed in the door. But there was this desperation that they had to do everything, and it had to be done correctly and it had to be done on time because otherwise they might blow this wonderful opportunity. So how could you not care about students like that? I finally said, 'May I see your assignment sheet?' Would you care to guess how somebody in the Department of Educational Opportunity felt was the appropriate way to introduce these academically disadvantaged students to a huge university library. To ask as the first question; 'What are the differences between the Library of Congress and Dewey classification systems?'

I knew then, that I wanted to find out if what I then called information management skills could help these students succeed. I began that Fall to work on my doctorate at Columbia University and went back to Brooklyn College to do a controlled experiment. That is another whole story, but the results were very, very interesting.

And one other experience. About that same time I lived in an 80 unit apartment house, around a courtyard, and I had a child who was a 'latch key kid' before the term was invented. I was tearing home one day, eager to see him, and there, in the courtyard, were all of my neighbours, standing around in agitated groups. Clearly something was seriously the matter. I went to find out what was causing this restlessness among my neighbours. Most of them were elderly Scandinavian people, on fixed income, living in a rent controlled building which meant unless the owner did major renovations the rent was guaranteed not to go up. Except, guess what? When the rent bills had come out that morning, everybody's rent had gone up. And all day long, my dear sweet neighbours had been helpless and frustrated *because they did not know they had an information problem*. They did not know who to ask or what to ask about, why this had happened and what if anything they could do about it. And to them on fixed incomes, it meant a difference in the quality of their lives.

These examples, from the small children, to the college, to my elderly neighbours, are examples of what happens when you are information illiterate compared to when you are information literate. We are talking about the difference in quality of lives — but what has this to do with each of us?

I think that since the Los Angeles riots those who are the 'haves' in society realised this past year in America that they can no longer afford to ignore those who are the 'havenots'. For the first time comfortable middleclass people living in suburbia realised that what happened in the inner cities, what happened with the homeless, what happened with those who were discriminated against, has something qualitatively to do with their lives. Our communities are too small, our world is too small, not to be concerned about the quality of life for all people — because *we* will be affected. The current generation in America is the first one that will have a lower standard of living than its parents.

No one will deny that we are living in the midst of an information explosion in an information age. There is a cartoon which says 'School officials said that the fire which started in the media centre was probably caused by an information explosion'. The realities are that just what that means in terms in practical changes in education is frequently overlooked, but the old style of teaching/learning is still very much present.

This makes me nervous as a speaker, because basically we are participating in the passive kind of learning mode that characterises much of our education. Where the fount of our knowledge, which is me today, but it is usually a teacher or a professor, pours the information into the students. There is so much information out there, and the role teachers have always taken was to find the best, the very best and to present that package of information almost as a gift to students. **And that is the way most of us learned, which is one of the reasons why it is very hard to turn education around — because we replicate the kind of teaching/learning situation that we experienced.**

What are the problems with this? There are a number of them, one of which is that 'Students carry away in their heads and in their notebooks not more than 42 percent of the lecture content, but when students are tested a week later, without the use of their notes they can remember only 17 percent of the lecture material'. And you are not going to be tested next week, so you are not even going to remember 17 percent of what I say. If that is true, how much are students really going to remember a semester later; a year later; by the time they graduate?

One of the reasons the old style cannot continue is that it has never worked. We *do* learn something for a brief period of time, but it does not stick! Furthermore, with all the statistics that we have about how rapidly information is changing, what good is that odd part of a percent that students are going to remember when they graduate, because probably that is the very thing that has been outdated. **So education as usual cannot work.**

In the United States there was an extensive array of educational reform reports published in the eighties. But it was as if education took place in a vacuum. There was practically no mention of the information society, or information, or information technologies, or even libraries.

The one glorious exception was one of the very latest of the reform reports by Ernest Boyer called *College, the undergraduate experience in America* which said 'At a college of quality there is a wide range of learning resources that enrich and extend classroom instruction and encourage students to become independent, selfdirected learners'.[2]

Unfortunately that same report contained some very distressing information. It said that one out of every four undergraduates spends no time in the library during a normal week and 65 percent use the library four hours or less each week. Let us be candid about it, what are most of these students doing during those four hours? They are either there to meet someone or to find a quiet place to study their textbook for the next exam. This very sad statistic is more sad than it seems on the surface.

The education reform reports however were clear about a number of concerns — preserving democracy, economic wellbeing and the quality of life.

Democracy

A former US Secretary of Education said that there is a danger of a new elite developing in our country — the information elite. Another national leader pointed out that information literacy skills are needed to guarantee the survival of democratic institutions, as far back as 1976. What does this mean?

Four years ago during the presidential campaign, two studies centred on Alabama were conducted. One showed that television newscasters were broadcasting less and less campaign coverage. Why? Because they got lower viewer ratings. If you want to go ahead in a career as a newscaster, you need higher viewer ratings, so they were eliminating campaign news from their broadcasts. Another study showed that more and more people were indicating that television was their sole source for deciding how they were going to vote. This meant that most people were receiving their voting information from paid political announcements which tend to be in 30 second or 60 second bites which were very negative toward the other candidates.

It is very interesting that the 1992 political campaign has been very different. There was far more coverage on television., and part of the change was due to Ross Perot. Amongst other things he paid for half hour time blocks on television where he illustrated his cammpaign message with graphs and charts and statistics. People liked it! Now whether one agreed with his statistics or not, the feeling was that for the first time, a candidate was trying to convey information instead of the very slick kind of glib 'give and take' which does not allow consideration of the substance of issues. The issue then is how do people differentiate between very different information on the same subject? Without having information literate citizens who are able to make good decisions, how can there be a democracy? There is a danger that the person who can afford the best public relations firm will be the winner.

Economic development

Another concern that came out in the reform reports was clearly economic development.

> People who are information literate, who know how to acquire knowledge and use it, are America's most valuable resource[3]

This can be said equally of Australia. If our countries are to do well economically and in international competitiveness, it must be because of the ability of the people to use their minds. Management literature in the United States increasingly talks about the need for more flattened business structures, where people who are closest to the individual problems or issues, are the ones involved with helping to provide the solutions, rather than somebody who is off in their business ivory tower. Information literacy for economic development and wellbeing is very important among all levels of employees.

Quality of life

Finally, we get back to where I started — the quality of life. I particularly relate to this quote, by Harlan Cleveland, because of the emotional impact the use of the word 'peasant' carries with it. 'People who do not educate themselves and keep educating themselves to participate in a new knowledge environment, will be the peasants of the information society'.[4] How many of you wish your children or grandchildren to be peasants? Nobody does!

What then is needed is a seamless educational process. It begins with preschool, through elementary, high school, college and on into lifelong learning. There is nothing else that will do in this day and age. The reports from the United States were very weak at the point of suggesting in a practical way how to make that happen.

American Library Association Presidential Committee on Information Literacy

At this point, the American Library Association Presidential Committee on Information Literacy was established. It actually grew from a cooperative effort between the University of Colorado (where I was at the time) and Columbia University. The result was a working seminar of top people from higher education, including librarians, at former New York Governor Harriman's estate on the Hudson. We threw away the key for a few days, very much like we wish we could do with you here. The purpose was to get the higher education leaders to talk with the leaders in academic librarianship, to determine whether it made any difference that while we are in an information society, the education reform reports ignored that reality. The conclusion was an affirmation of the lack of awareness of the implications of the 'information society'. A report of the seminar was published[5] , but most importantly, the incoming President of the American Library Association, Margaret Chisholm, said that the dialogue was too important to stop at this stage. On her initiative the American Library Association Presidential Committee on Information Literacy was established. The membership consisted of people such as the Executive Director of the American Association for School Administrators, the Executive Director of the American Association for Colleges of Teacher Education. People at that level, who came together with librarians to continue the dialogue.

The American Library Association Presidential Committee on Information Literacy Report[6], defines Information Literacy, as

- *being able to recognise when you have a need for information.* That, believe it or not, is the hardest part about being information literate. People grow up accustomed to teachers and professors giving them the information they need. Television certainly reinforces that model with the news expert providing seemingly all the information needed on various topics, and unfortunately, even in our churches (where most people just listen to a sermon on Sunday) where the Minister tells them what they need to know. This pattern of information receiving means that people do not develop the skills, like my old Scandinavian neighbours, to know when they have an information need
- *being able to identify the kind of information that can help in that particular situation, to be able to locate it, to evaluate it, organise it and use it effectively.* Clearly this is moving into the critical thinking skills and that the repackaging of information is something that we often do not think about. These two things are probably the most often neglected parts.

Critical thinking

The Report said that ultimately information literate people are those who have learned how to learn because they can always find the information needed for any task or decision at hand and again we have already heard from the two previous speakers the importance of learning how to learn. And as Vice Chancellor Professor Robinson said: 'This is what we thought education has been about all along — learning how to learn'. This **is** common sense — we frequently overlook common sense. We take it for granted. College catalogues across the United States for decades have said, 'We teach our students how to analyse and synthesise information for effective problem solving'. But what we have failed to understand in America is the beginning part of that thinking process. If you do not start with adequate, accurate, up to date information, it does not matter how well you can think; you are not going to come up with a good solution. And this part of the critical thinking continuum is what we have so frequently overlooked. In fact, most of the reform reports emphasise lifelong learning and active citizenship as a goal. The only way to accomplish that is to make learning more active.

How does one do that? Some of the suggestions have been

- higher teacher salaries. Does that guarantee that learning is going to be more accurate? No
- site based management where more control is left to the individual principal, the head of the school. Does that guarantee more active learning? No
- longer school days, longer school weeks and more homework. As if more of what has not worked, can work

Now we can laugh about that. Yet in America, for years, that has been the focus of how things were going to be made right in education. And then through the work of the Information Literacy Committee and the work of thoughtful educators across the country came the common sense idea of moving to something called resource based learning — to make learning more active. We did not invent any of this, it was always out there.

Resource based learning

What is resource based learning? I recently found this wonderful definition that goes back to as far as 1977 in the *International Dictionary of Education*

> Resource based learning is a learning mode wherein the pupil learns from his own interaction with a range of learning resources, rather than from class exposition

In other words, the students learn from real world information — from newspapers, from television, from online databases, from journalists, from books, from community experts, even from government agencies — all the people and agencies which are out there in the real world, that the students will have available to learn from for the rest of their lives.

What are some of the advantages of resource based learning? Here in Australia, there is talk about going back to basics. Certainly that was one of the slogans after the United States reform reports. 'We used to do it right before — let us go back to reading, writing and arithmetic and teach basic skills...' The truth of the matter is, the people who are saying that know nothing about what is going on in education. There is no way to go back to basics now. For example

- any student who had any kind of learning or physical disability was taught differently. By law we can no longer do that
- we gave IQ tests to students and we ranked them — and don't you think they knew? — 4.1 was better to be in than 4.3. We cannot do that anymore. We have to have, by law, mainstreaming of students
- we also know, again if we use common sense and not educational jargon, that when students come to a classroom — any group of students whether at the college level or the school level, any classroom of 20, 25 or 30 students — are all the students going to be at the same academic level? Of course not
- are all students going to have the ability to learn at the same rate? No
- we know that students have different preferred learning styles. We may have learnt best by reading, by underlining in a book, but the younger generations, particularly where they are exposed so much to television, tend to be much more visually oriented than their teachers and their professors. And so they learn best are by a more visual kind of learning process. We also know that some students learn best by working in groups as opposed to individually.

But despite the fact that any person with any common sense who has ever been in classroom would say that the students are at different levels, they learn at different levels, they learn differently from each other, what have we done? We have given them, by and large, a single lecture and a single textbook. What we have tended to do is to pitch the class at the least common denominator because we feel a moral obligation to the less bright student. The teacher spends more time with a problem student, so we are losing some of the best of our students because they get bored and are turned off.

Resource based learning addresses all of these needs because it allows students to match learning materials to their capabilities and preferred learning styles. If reading is difficult for them, they can read from journal articles instead of books. It allows students to use videos for learning or to consult local experts. Resource based learning has an advantage over textbooks because students can see the relevance of real world information to their lives, particularly students who perhaps need more motivational support than others. It is very hard for learners to get excited about a basic reader or a text book. Students are not going to use those things when they can get out in the real world.

We have a very active program in the United States called 'Newspapers and Education' where major newspapers across the country work with classroom teachers so that children can learn from newspapers. The student can learn mathematics for example, from food advertisements in the newspapers and it is easy to understand how important that can be to homes with limited money; that by shopping at one place where chickens are selling for forty nine cents per pound, how much money they are going to save as opposed to another place where the chickens are sixty nine cents per pound. Learning now becomes something that can affect the student's quality of life. Students then have gone home and worked with their parents with the shopping — and learn mathematics at the same time! That may be an extreme case, but when students are dealing with newspapers, with online databases, and with government agencies, the value of that learning feels more real to students than learning from textbooks. It can help motivate students to learn.

Cultural diversity

We also are very much concerned in America with cultural diversity. Every cultural group wants to have its proportionate share in the curriculum, which is totally impossible, although some places are trying it. California has mandated that 'every cultural group has to be represented in every textbook'. Certainly such a mandate must not only affect the quality of the contents, but it almost ensures that no cultural group can be well presented — rather one ends up with a bland caricature that can please no one. A more practical approach is resource based learning. Students can see movies, read books, read journals, can read newspapers that are geared towards particular segments of our society; and with these portrayals, individuals with all their cultural and ethnic diversities can become real to students. That does not mean that students necessarily read only about their own cultural interest. A teacher can facilitate students' gaining a greater exposure to the Afro-American culture, for example, by having them read a popular magazine such as *Ebony* or by watching a particular television talk show. Resource based learning is a practical response to our concerns for diversity, for differences and to incorporate students' learning abilities and styles.

Another example, from a situation here in Australia, and described in *Promoting learning*.[7] A teacher had received very negative reactions from a group of students during discussions about Vietnamese migration. What did this teacher do, but have the class read a story written by a boat child and then to write first person essays pretending that they were a boat child who had settled in their community. A brilliant resourced based solution to facilitating a learning problem!

Besides the flexibility of differing resources to meet the learning needs of individuals and the emotional impact that some information resources have, there is another reason why resource based learning is so important. That is, one medium cannot always accomplish the job that needs to be done, particularly when we are facilitating learning in the affective domain. Sometimes more than one resource is needed to reinforce another one. This further example goes back to the days when 'high tech' was a phonograph record instead of a computer. I once took a group of students into a high school in Brooklyn because it was supposed to be one of the most advanced reading centres. In the corner was a black boy with a book and earphones on and a phonograph record going in front of him. Of course, we were not paying any attention to the teacher librarian. We were too busy trying to figure out what this boy was doing, who clearly should have been playing football or something less noble in the streets of Brooklyn, certainly not someone to be in the Learning Resource Centre on this gorgeous afternoon. Finally, the teacher librarian noticed and she said, 'Oh, you're looking at Tony. Well let me tell you what happened. His English teacher sent him here to the Learning Resource Centre because he was being disruptive in class.' Of course that is not why we like students to be sent to the Learning Resource Centre, but in this case magic happened. The class was doing Shakespeare and he was bored, which is why he was being disruptive. The teacher librarian asked him 'What play were you doing?', and he told her. She played it for him on a phonograph record, with the book open before him, and he fell in love with

Shakespeare. And every moment he could get, he went back to that library to listen to another Shakespearean play. *So that is another reason we need resource based learning — because the mediums can reinforce each other to promote learning.*

Too much content

The other reason is that there is too much content to cover today. Think of how much history has been made since you studied history in school. Are you going to start chopping off at the early end or skipping something in the middle? Also it has only been fairly recently that we have found out that women had anything to do with history. So, it changes. We are required to teach more things. We now have to cover things that used to be taught by the parents. For example, we must cover areas related to drug use, to sexual practices, not to mention new topics such as environmental concerns. There just are not enough hours in one day to have a block of time for every subject.

One of the very positive things that has come out of our reform movement has been a focus on integrating the curriculum, which coupled with resource based learning is transforming schools across our country. It is incredibly exciting. I happen to know about this because my sister and I are working on a book which is aimed at elementary school principals. We have had the privilege of interviewing principals and teacher librarians and teachers across the country to hear about some of these things, and I am just going to give you a very quick example. In an elementary school in San Antonio, Texas, all the fourth grade teachers, with the teacher librarian decided they were going to teach an integrated unit on the weather. For two or three weeks every class related to the weather. For example, to convert centigrade to fahrenheit provided the vehicle for learning mathematics. Learning took place either individually, in clusters and in groups. One thing the students found out in the process was the town that gets the most rain in the United States, surprisingly, is in Texas. Two weeks later, after the project was over *The Weekly Reader* came out with a major article on the weather. *The Weekly Reader* is a little newspaper which all children read and is distributed to schools on a regular basis. This issue of *The Weekly Reader* mentioned that town in Texas with the highest rainfall — but guess what — with a different measurement! Well, the students were shocked about this! They did further research and decided they were right and wrote to the editors of *The Weekly Reader*. Those students certainly are learning to be information literate; they are learning to question and evaluate information from 'experts'. Resource based learning can address many problems in education systems in very practical, common sense, kinds of ways.

Library instruction, bibliographic instruction, or what?

When we talk about resource based learning, we are *not* talking about more library instruction; we certainly are *not* talking about bibliographic instruction; I wish we could erase those words. What does bibliographic instruction convey anyway? Something to do with bibliographies? Resource based learning is different.

What does resource based learning mean?

- It is involved with the whole thinking process. Somebody talked about computer literacy before. Not all information is on computers, so computer literacy overlaps with information literacy. *It is in fact a subset of information literacy*
- It is certainly related to the communication skills because unless you can receive and send information there is no way that you can be information literate
- It is part of the critical thinking skills
- It is talking about a major shift in paradigm

It is about how learning takes place, where the students take more responsibility for their own learning. Where teachers do not tell them which resources to use but rather send them out to the library, to the community, to find the very sources from which they will learn. The faculty member or the teacher becomes a *learning facilitator*, helping the students to find information and helping the student to discriminate between good and poor information. This used to be a skill had by only our better students coming to college.

The questions in resource based learning become

- What can students learn for themselves?

Once the answer to that is known, the next question is

- How does the teacher, by setting up these learning experiences help the students to successfully navigate the minefield of outdated information, of biased information to find the information that is worth learning from, and to develop those skills that will serve them throughout the rest of their lives?

And where is the librarian in this? Probably if such efforts are going to be very successful with resource based learning, some librarians are not going to enjoy their role. Those who have been leaders in library instruction and bibliographic instruction are going to find that they are doing less direct teaching and more working as a curriculum planning and support partner with a faculty member, behind the scenes. *It is this partnering which makes resource based learning possible.*

National Forum on Information Literacy

One of the outcomes of the ALA Presidential Information Literacy Committee Report was the suggestion that there should be an ongoing coalition of national organisations that are concerned with these issues. We have many library member organisations, such as the Special Libraries Association, Association of College and Research Libraries, and the American Association of School Librarians, but they are in the minority. The largest group are education related organisations and the largest of these is the National Education Association. Another large individual membership organisation is the American Association of Supervision and Curriculum Development which has passed a resolution about the importance of information literacy. This resolution requires all the offices at the national headquarters to report annually on what they have accomplished to promote information literacy. Also part of the coalition is a group of noneducational organisations such as the National Association of Governors and the Information Industry Association. One early member, the National Association of Counties, joined because of its concern about improvement of the economy. How can local government govern if they do not have good information on which to base their decisions? Some advocacy groups such as the National Forum for Black Public Administrators and the National Alliance for Black School Educators, have joined because they are concerned about individual empowerment for particular groups of people.

The one thing that holds together the more than sixty national organisations is the importance of people being able to access and use information for personal empowerment. That is what our National Forum on Information Literacy is all about.

The approach the Forum has taken is not to come up with a national agenda and then try to get these organisations to agree on what needs to be done to promote information literacy. We decided that if in fact information literacy is a means of personal empowerment, then we needed to practice what we preached and use information literacy to empower Forum members to better accomplish their own priorities. We stumbled into this. I wish I could say we were brilliant and solved the whole picture from the beginning — but we did not. We thought in very traditional terms of setting a national agenda initially, but we soon realised the right approach was to permeate and infuse these national organisations with the concepts of information literacy and where appropriate, resource based learning, in ways that were meaningful to their very diverse *memberships*.

Now when I go into a new organisation that somebody thinks should be a member, I start by saying 'What are your priorities? What is of importance to your membership?' and then we talk about how information literacy can be a total empowerment to accomplish that. My hope is that the National Forum on Information Literacy will go out of business in three to five years, that we will have infused so many key organisations with the concept of information literacy, that it will be so much a part of their fibre and being, there will be no need for a stand alone forum.

Some examples of what the Forum has been able to achieve

- **Publication of articles** in, or whole issues of member association publications on information literacy. One of our first successes was the National Association of Secondary School Principals which had a whole issue of its journal devoted to information literacy in May 1992
- **Programming at professional conferences** If it is, for example, a conference of principals, we suggest principals who are members of the Forum as speakers. There also may be a teacher librarian or I may be there, but at least some of the speakers will be peers of the audience, talking to them about why information literacy is important
- **Cooperative projects** such as the current one between the National Education Association and the American Association for Colleges of Teacher Education. In the Winston-Salem area, North Carolina, a middle school was looking for a way to focus its curriculum reform. It is going to be based on resource based learning. The exciting part about this is that there are two colleges of teacher education in that area, and *as the changes occur in the curriculum, they will be tied to changes in teacher education — incorporating information literacy*. We will not only have another model of resource based learning as a practical tool of empowerment for curriculum reform, but we will begin to have some model learning programs and teacher education programs, incorporating information literacy and resource based learning, during initial training instead of later, in the workplace
- **Involvement of the Forum in accreditation processes.** In the United States, every five years or so, university campuses must be evaluated by an outside independent agency to keep their accreditation. Without this reaccreditation the universities cannot get federal student loan funds, which as you can imagine, is a very important source of funding. An institutional member of the Forum, is one of those accrediting agencies — the Middle States Commission on Higher Education. Questions have been raised about the need for more active learning and the preparation of people for lifelong learning and active citizenship. How can they do that? The way they decided was to call for assessment of information literacy on the campus. Until now, accreditation has taken the form of questions such as 'How many books do you have in your library? How many journal subscriptions do you have? How many librarians do you have?' Now the questions are 'How many syllabi include library based assignments? What is the nature of those assignments? Are they appropriate for the program and its students? Do they show evidence of thought and creativity? Do they promote active learning? Do they take advantage of primary sources when appropriate? Do they display knowledge of the range of resources available to students in the institution?' (I disagree with that one because it is too limited. Hopefully they will change it to go beyond the campus library to include the information resources of the whole community.) 'Is there a sense that as students progress from the beginning of the degree program to its conclusion that they are required to use increasingly complex library research skills?' (This is also going to be revised!) Following this initiative there are two other regional accrediting agencies that are also moving in this direction. As you can imagine this is an extremely powerful force for persuading academic officers and faculty to consider information literacy

- **Research** These are three examples of research projects which document the difference resource based learning makes

  1 The State Department of Education in Colorado in 1992 published a study of 221 Colorado public schools. They looked at the rise and fall of test scores in relation to the money spent on library media programs independently of other school characteristics. The study showed that proportionately the outcome in terms of students' performance of standardised tests is going to be better in direct relationship to the money spent on library media programs. Such programs are the best single school predictor of test scores amongst all the elements considered

  2 One of the people on the Presidential Committee on Information Literacy used to be a school superintendent. He now is the president of a company called SchoolMatch which collects and sells information on school systems across the country. When a big company is going to move and is trying to decide whether they want to locate in one particular area or another, they engage this company to provide them with information about all the schools in each area as they want the best school for the children of their employees. That gentleman, before the ALA Committee was set up, stated publicly that, from all of his studies, the factor that can most guarantee student performance on standardised tests is the money put into the school library media programs. I talked with Bill recently for the book we are doing and he says that is still the case

  3 I also heard a school superintendent from Blue Valley, Kansas, speak at a conference recently about the fact that the students in his district went from the 70th to the 90th percentile in performance on the Iowa Basic Skills test. He said, 'We cannot prove that this change resulted from resource based learning but that was the only thing we changed in the district when I came in.'

We do need more documentation on the difference that resource based learning is making at both the school and university levels, because in terms of actual school retention, there is a strong indication that the motivational factor for more students to stay in school is high for those who have access to resource based learning. We need more hard data because money is tight and *there are still educators who are uneducated to the value of resource based learning,* and noneducators whose only solution to school problems is to say that 'we must go back to basics'. We need hard data to show them what really will make the difference.

Conclusion

We are talking about people and their quality of life.

> Futurists have a tantalising way of describing the year 2001 as though being there has little to do with getting there — the future simply arrives full bloom. But it is the succession of days and years between now and then that will determine what life will be like. Decisions made and not made will shape the schools of tomorrow.[8]

To parallel that, what follows is something of the writing of Peter Elyard, who has had several appointments as Director of Technology, Environment and Conservation Councils in South Australia, New Guinea and Canberra. He is also the immediate past director of the Commission for the Future.

> Most Australians when thinking about a future scenario articulate a probable future based on the reading of likely power arrangements, vested interests, etc. This is essentially a passive and fatalistic process. An alternative way to proceed is to envision a preferred future. We all know the huge problems and challenges facing the global environment caused by population increase, poverty, social economic inequity, world urban migration and other factors. We will not solve any of these problems if we simply focus on the

> problems themselves. What we need is a positive concept to address those problems.
>
> Visualise a preferred future and then look at the task for the education system to help to realise it. Education must lead and help to create a preferred future, not just respond to the demands of the pragmatists who are articulating a probable future. If we can successfully implement a program to promote, lifelong learning, an enterprising culture and a caring culture together with a paradigm for cooperative verbalism, I am certain we will be able to look forward to the twentyfirst century with confidence. Major social justice goals will be achieved by such an agenda. Lifelong learners will be able to help themselves. Enterprising people also, while caring attitudes will lessen disadvantage generated by cultural and gender differences.[9]

As you think about the information literacy agenda for Australia, I would like to end with two more thoughts.

Harlan Cleveland in his book *The Knowledge executive* describes the kind of leader needed for this time of the over abundant and fragmented information, when generalists are needed who can make connections and provide leadership to coordinate the efforts of highly specialised experts. His whole book shouted *Librarians* to me, but nowhere did the word librarian, information specialists or libraries even appear. However, shortly after he spoke to the American Library Association's conference a few years ago, he wrote an article in the *Minnesota Star Tribune* in which he stated

> Librarians, along with journalists, tend to be critical valves in the people's information pipeline... but librarians have a generalist, which is to say a leadership responsibility. They can bring to bear not only the news of the day and the arguments of the moment, but the wisdom of the ages. They have the most reason to understand that using a reference system is a way to unleash the searcher's insight. As each new information technology comes online, it is the librarians who should be educating the rest of us about it.[10]

Even better was the headline for the article which read *Where the leaders are – librarians bring it all together*. The same recognition I found interestingly enough, was in a science fiction series that I read not so long ago.

> Some time after colonising a new planet, Captain Duncan Roderick decided to add the Librarian, Miss Burr, to a small inner planning group. He had found that Evangeline Burr was an exceptional woman and in an era of specialisation, Evangeline possessed more interdisciplinary knowledge than any person that he had ever known. And if she didn't have the facts in her mind, she could find them quickly. He'd made a note to himself to start utilising Evangeline as a bridge between the various scientific fields. There had been incidences back on earth when a discovery that seemed insignificant in one field would have opened entirely new avenues of speculation and progress in another field, if people had only known about it.[11]

Now more currently in the United States or Australia there may be few such public acknowledgements that Harlan Cleveland and Captain Roderick have given to librarians as the natural leaders for quality of life, for economic development, for quality education. The fact remains that for better or for worse, we are the best that our countries have in terms of providing the kind of leadership that is important in an information age. You are the information elite, the information experts of your country and of your states. Maybe you did not go into librarianship to become a community leader or to become an educational leader, but the information society needs connectors, information connectors and that is you and that is me.

Maybe you do not see yourself as a coloniser of a new planet, but I do hope that you will at least see yourself as that much needed 'good salt', preserving information and enhancing its value for others. For if enough librarians are not willing to permeate their surroundings with their talents and expertise, then all of society will lose. You can be that much needed salt within your campus, within your school, within your community, and I do hope that you will make that commitment to such as leadership role.

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WHY WORRY? I'M NOT!

Rodney Cavalier
Chair Australian Language and Literacy Council

The title of the session that I was asked to give was 'Why Worry?', with a request that I give you a dissertation on why these areas are so important to Australia's economic, social and cultural wellbeing. I decided to vary the subtitle somewhat by making it 'Why Worry? I'm Not!'

Let me begin with a confession. I am illiterate about information literacy. I have consulted with all the leading figures in the Australian world of adult literacy, many of them professors and academics with national and international reputations. None of them were able to enlighten me on the term. I consulted with the report and some of the authors of the government's policy paper *The Australian language: Australian language and literacy* [1] Again I was not able to glean any helpful information.

I was generally aware that literacy is becoming the all purpose noun of the moment, a hurrah word, which denotes that the inherent is well versed in the adjective attached. Apart from the adjectives associated with this gathering, I am aware of the term 'cultural literacy' and the doubts abroad that it encompasses anything worthwhile. In a recent issue of the *London review of books*, there was a review of a book which had the title *Moral illiteracy*, which I did not even bother to read.

Not for the first time, have I encountered the absolute divide between the cultures of librarianship and education, although from what is happening here today, there is actually a mixing in this audience. Most people in the national leadership of Australian libraries are familiar with the term information literacy and many could essay a definition and when I asked a Pro Vice Chancellor of a university in Sydney, did she know the term information literacy; she disappointed me by saying, 'Yes, I do'. While she was not actually able to define the term, she thought it probably meant effective use of libraries. But, no one, apart from this person in the education or training cultures knew about the term or had a clue about what it was intending. I suppose, that few librarians can respond instantly to training icons such as Mayer or Carmichael or competency based training.

As one who belongs to no cloister, I have to question the predilection of each culture to employ icons, jargon and that most potent of contemporary incantations, the acronym. The sole purpose of vocation specific language is to define sect membership by the crude tool writing and speaking with words and symbols that those not admitted to the rites are unable to understand. I have to wonder why it is that librarians and educationists believe that exclusionary language enhances their professional deliberations. Do you really speak that way in private?

I have tried very hard to grasp just why a term like information literacy is so important. I do have a clear understanding of what we now understand by literacy in Australia, subsequent to the International Literacy Year in 1990; the year when the earnest endeavours of so many good people hone a hard definition for the purposes of government policy making. After nearly two years work, a policy paper emerged from the consultative process. This paper offered a definition that

> Literacy is the ability to read and use written information and to write appropriately in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth, and to function effectively in our society. Literacy also includes the recognition of numbers and basic mathematical signs and symbols within text. Literacy involves the

> integration of speaking, listening and critical thinking with reading and writing. Effective literacy is intrinsically purposeful, flexible and dynamic and continues to develop throughout an individual's lifetime. All Australians need to have effective literacy in English, not only for their personal benefit and welfare, but also for Australia to achieve its social and economic goals[2]

The paper, addressed the many types of literacy. It acknowledged that literacy is a continuum of skills and traced the notion that literacy covers many capacities from basic or functional to the furthest reaches of personal empowerment, when a person is able to employ writing for intense exploration of an inner self and communicate in a persuasive fashion to the audience sought. During the International Literacy Year, a policy directions paper raised the concept of active literacy.

> For an advanced technological society such as Australia, our goal must be in active literacy which allows people to use language to enhance their capacity to think, create and question, which helps them to participate more effectively in society[3]

I have presumed that what you are wrestling with in the term, information literacy, is the notion of context. Highly learned people cannot comprehend newer machines. The video cassette recorder defeats the overwhelming majority of people over fifty. It does not matter whether they have three degrees, something like more than 85 percent of the population simply cannot work out how they operate, and they certainly give up once they have tried to read a manual which explains it. Yet almost any child under eight can deduce the workings of such appliances without the assistance of a manual. If ever I have attempted to play a computer game, I need a young child to demonstrate it to me. The two cultures of 'science, and nonscience', discovered by C P Snow is no less mutually exclusive now, than when he coined the term. Teachers of first year university students in faculties like medicine, have winced at the literacy of students who have scored extremely high marks in their school leaving credential. Literacy is not a level which we attain; literacy is a lifelong process as well as the means by which we undertake all learning through the use of the written work of others.

Literacy and language skills will become a feature of workplace industrial agreements — whatever the form of industrial relations the Australian electorate chooses to support. The enquiries of the Australian Language and Literacy Council into a ministerial reference on this question revealed that employers are expecting communication skills which are tantamount to literacy. Enlightened employers are providing on the job education and training for employees who cannot read nor write. In an enterprise like BHP Steel, foundry workers whose first language is not English used to be able to perform adequately in their jobs without being able to read or write in English. Not now.

The question is whether such a shortcoming is a situation parallel with incompetence and foreboding of new technologies, which once overcome, open a new world of information. I have grave doubts that there is such a parallel.

The definition of information literacy by Patricia Senn Breivik in the conference papers was admirably straightforward. No one would argue that success in most intellectual endeavours depends upon recognition of a need for information plus the ability to locate, evaluate and use it. I was delighted to note that in the United States, the American Library Association Presidential Committee on Information Literacy states that: 'Information literate people are those who have learned how to learn'.[4] I was delighted because it is the very same working definition I have been employing for the past decade of what an educated person is. I have come to the lame conclusion that information literacy is another way of expressing one of the outcomes of a sound general education. All that is different is the nomenclature — and perhaps the toys.

I grew up with the phrase 'knowledge is power'. I can recall all the enthusiasms which touch on variations of that theme.

Being able to learn, knowing how to learn to learn, is what distinguishes education from training. It is a distinction critical to our nation's future. The present enthusiasm for vocationally specific education and training may address present skills shortages. It will not however prepare the nation for the challenges of the future. To debauch the curriculum of our schools and universities so that they meet the needs of industry would be to relinquish control of our political and cultural destiny. In some university prospectuses there are phrases such as 'our courses are designed to meet the needs of employers'. In as much as you can have in a sentence, a perfect expression of what a university is not, there you have it! Australia needs the quality of excellence that flows from an excellent general education in order to provide the wisdom, integrity, vision, understanding and intellectual curiosity for our leaders in politics, industry and education.

Knowing how to ask the right question has always been the most likely guarantee of getting the answer which you are seeking. Getting the question right is the essence of information gathering whether it is discovery or research. Even the most brilliant person will gag on a project where there are no obvious pathways. The essay then, about the journey that he or she takes is at least as important as the destination and its revelations. Equipping the knowledge seeker with the means for discovery is where librarianship intersects with education. I gather that making that achievement a discipline is what information literacy is all about.

Is it possible to make a system out of anything so haphazard? Would the result provide anything new? Is not the capacity to make sense of the wider world on a systematic basis a part of the human condition? *Homo sapiens* evolved from *Homo erectus*, an evolution traceable, among other things, through the growth of the brain. The brain grew because the emerging Man needed the space to store information and the processes to retrieve it. All living creatures employ pools of information so as to guide their migrations, their habitats, their feeding. Humans have language in which to express that information and the means to store it, locate it, evaluate it, use it.

The Merlin, in one form of another, has been a key player for all rulers. A knowledge of the doings of kings and presidents and prime ministers will reveal only so much if the advice and the warnings of a Richelieu, a Bismarck, a Cecil, a Colonel House are not also known. Having the ear of the Minister is truly the source of power in our political system. The kitchen cabinet can be nearly as important as the real thing. The market researcher and the public opinion pollster are the modern guru.

With wider questions of politics or economics or specialised knowledge, the rich and the powerful have been willing always to expend some part of their material wealth to gain access to information which augments their wealth and power. Information in that sense is a form of capital, one that has been capable of expression in monetary terms relative to its scarcity, relative to its accessibility, relative to its usefulness to the purchaser. The history of all cultures records the central place of the soothsayer, the seer, the witchdoctor, the guru, the adviser. They held their positions not through trickery. Reliance on such figures resulted from delivering results over time. The adviser or courtier with influence has gained that influence from the gift of retrieving from the accumulated store of reading and experiences, that enabled them to answer the questions of the day, and answer in cogent language that relates the particular enquiry to broader concerns. Such advisers were able to conjure the information they possessed long before the invention of computers.

Sherlock Holmes, no less, expressed the reaches of power for such a person when he explained to his colleague Dr Watson, the role of his brother Mycroft, in the British government.

> He has the tidiest and most orderly brain, with the greatest capacity for storing facts of any man living. The same great powers which I have turned to the detection of crime he has used for this particular business. The conclusions of every department are passed to him and he is the central exchange, the clearinghouse which makes out the balance. All other men are the specialists, but his specialism is omniscience. We will suppose that a Minister needs information as to a point which involves the navy, India, Canada and the bimetallic question.; he could get his separate advices from various departments upon each, but only Mycroft can focus them all, and say offhand how each factor would affect the other. They began by using him as a shortcut, a convenience, now he has made himself an essential. In that great brain of his, everything is pigeonholed and can be handed out in an instant.[5]

This short story of the 1890s, of course, is almost a perfect definition of what a database reports to do. I suspect that all of us has seen a little of Mycroft on a smaller canvas. Have we not all encountered the filing clerk who can locate everything quickly? There was a marvellous character portrayed by WC Fields, who could put a lot of humming and hahing, look at his desk (an oldfashioned pigeonholed desk), look at the apparent chaos on it, try to find a document from 2 February 1926. 'Humm' as he (and it usually was a male) went through, '1922, 1923, 1924, 1925, 1926, February ... er ... er. There it is Sir', and do it every time! Or, the secretary to a corporation, the keeper of the flame, who can recall when things happened, who said what. In more celebrated debates, the person who becomes the first point of reference when executives think a precedent might be useful to their line of argument? We all know the librarian from the old school, stationed at the reference desk, who can assemble a passable bibliography, even as you stand there. Such people have made themselves indispensable.

Has any form of technology ever replaced the pleasure of consultation, the immediacy of the response, the language of caring which informs the responses? I believe not. Among the academic literature in this area I noted that the Texan librarian, Steven Stoan[6] found that social scientists preferred to work their way through citations rather than indexes. They preferred to work their way through books, consult with colleagues and browse in open stacks. They did not make much use of general librarians. Of the persons surveyed, not less than 98 percent had extensive private collections which they used heavily and regularly; most importantly, their own collection of materials was their first port of call. I could not have imagined it otherwise, or how it could ever be. There is no one that I know, that in any field of endeavour, both in the humanities and the social sciences, who does not approach their work the same way.

However good the indexing and the cross referencing in the humanities, the utility of such instruments is minimal. Unless the title is immediately relevant to the present enquiry, its actual contents are likely to elude a researcher. In looking for any reading in my passions for example, politics and history, I would be likely to ask friends inside academies, or outside, about what they knew of a topic rather than dip into an index. Broad guides to holdings are invaluable in pointing to the reach of a collection. Only the most detailed descriptions of primary materials will save any real time in the use of one's eyes. An enquiry takes you where it will; you may abandon one's promising lines, reactivate what you dismissed, turn a tangent into thesis, alter your assumptions or decide that the search was not worth the candle. These are all legitimate outcomes of scholarship.

Stoan reported that in the humanities research is normally random, nonlinear and nonsequential. To find out what another author was saying, you need to read what that author wrote. There were no shortcuts and I dare to say, that there never will be. Abstracts are not an alternative. Another American, D R Swanson, has touched a theme very dear to me in his scepticism about the real prospect of retrieving most of the written record in humanities, simply because it is not possible to index each document stored so as to have its existence appear on a screen or printout in answer to every question to which it might provide part of an answer. Information retrieval, Swanson noted, is necessarily uncertain and forever open ended.[7]

Take one of my own interests, local history. In 1987, work in this area in New South Wales became a good deal easier with the publication of a bibliography of local histories[8] rigorously crossindexed and compendious according to its own limitations. The last point is however, no small qualification. As the editors explain in the introduction, there are many exclusions — all unpublished material, all theses, biographies, newspapers, magazines, railway history. For someone like myself, who became interested in the history of the Sydney suburb of Guildford, which has a railway running through it, the exclusions made the bibliography a very limited tool indeed. It contains but one entry on the suburb and references otherwise to entries on Guildford by way of cross index in other suburban histories. My checking of the cards in the Mitchell Library added nought to my knowledge. I have been able, nonetheless, to put together a passable account of the history of that suburb from personal interviews which themselves alerted me to private holdings in scattered locations. Maps and real estate plans told their own stories. Wider histories of the Great Depression touched on Guildford because it was the scene of defiance of tenant evictions that the aforesaid interviews had alerted me to. I do not believe that any index is going to be able to be contain all of the references required in order to capture Guildford or wherever and all of the other lines of enquiry into an indefinite future.

Each of us has a sense of where to head in hunting down an enquiry. It is a prior knowledge which we bring with us into the enquiry. Immersing oneself in the material is what keeps a student going. Going online with the Library of Congress will provide clues to further study but none so effective as reading a book or an article which contains a citation that goes to the heart of your interest. A researcher in the field or one let loose in the stacks and archives creates his or her own waves. People do hear what you are about, one interview points to another. The prefaces and acknowledgements of any work often contains multiple references to the spade work of earlier diggers and the inspiration of supportive people. Serendipity plays no small part of it. Something again I was pleased to see acknowledged in the academic literature in this area.

In 1976, I was perilously close to exam time in the subject, 'The politics of Southeast Asia'. I was simply unable to gain access to any worthwhile books in the University of Sydney Library on IndoChina. They were either in close reserve, available only for one hour at a time, or on extended loan to academics, which meant they were totally unavailable. I was in despair, so I was in just the right mood to shut off completely by accepting an invitation to a movie, the rerun of *Camelot* as it happened, to take my mind of approaching concerns. When we returned to the apartment of the young lady who had extended the invitation, as she went off to make coffee, I noticed on her dining table was a book, *The French in IndoChina and Cochin China* — the most valuable and most unobtainable of all the books which I needed to consult. She had happened to be helping her father earlier that day, working in his library, and thought that I might be interested in this book rather than have it thrown out — thus passed the evening!

There are many examples I could deduce in support of serendipity. Perhaps the most remarkable example was some research I was doing into the career of Charles Morgan, a federal Labor member of parliament who lost his preselection in the late 1950s to one Tom Uren. I had been reading that morning about allegations that he had been involved in an immigration racket before the Second World War. It seemed sensational and very interesting but I had not been able to find out anything else. In the afternoon I had a longstanding appointment with my doctor who asked me, very much by the way, have I ever heard of 'a Charles Morgan'. Why was he asking? 'A patient left me a pamphlet this morning about Charles Morgan's involvement in an immigration racket'. And I sat there simply stunned for quite a while. All the research in the world probably would not have turned up that pamphlet. There is no bibliographical listing of it that I had been able to find.

I have little doubt that digital information will make research in certain topics a great deal easier and more productive. I have equally little doubt that it will make no difference whatever to primary research in the humanities although technologies, now and unimagined, will lend themselves brilliantly to remarkable interpretations of all sorts of materials gathered previously by any and all means. When you are pushing at the frontiers, you are unlikely to find pathways. At that point no one has devised the question which opens the way to the answers you are seeking.

I am unconvinced that the future holds any greater challenges than the past. The information rich will grow rich, and the poor, poorer. Delete that adjective and substitute any other and you will obtain the same valid equation. Information is capital, like money or power or property. Neglected or invested, the growth of such capital is irresistible. The more knowledge a person gains in a subject, increments occur as a part of the order of things. The acknowledged expert in a field has his or her opinions sought out, they review other works in the field, they give interviews to the media if there is a wider public interest. Everyday, in every way, their knowledge expands.

Those without knowledge have a devil of a job taking the first step. Was it ever any different? And that is the real challenge that faces us — those of us who know how to make the use of libraries more effective — actually to get people inside the door, to make them recognise they need to know more, to be humble enough to ask the question, why or how or what? Is it any more difficult now? I do not accept that the alleged flood of information has made knowledge necessarily more difficult to grasp. The new has a habit of pushing out the old. Only the very best writing survives. Most people require only so much information as to get by. The journalist in the parliamentary press gallery does not require any knowledge of political science or Australia's political or constitutional history. Such people get by with a core of prior knowledge not dissimilar to a tourist guide book. Ready access to digestible information becomes a substitute for scholarly enquiry and a core of knowledge. So I trust that what we are to be talking about is real knowledge, not catch phrases and shortcuts that bypass the sweat and the endeavour and the turning of the pages or the punching of the page function on a computer, which enables someone to try and understand the subject of the moment.

Business management courses (I know they are going to love a term like information literacy) have tended to depreciate a knowledge of the corporate culture and a detailed knowledge of the inner workings of the enterprise. They put their faith (and shareholders money) in management processes which the courses hold to be universally applicable. The state of John Fairfax, Adelaide Steamship, Fosters Brewing and the television stations, to name just a few corporations, is testimony to what happens when production and services become secondary to the bigger picture.

Information is readily available always on the big ticket items like cash flow and accounts owing and sales over the last fifteen quarters, extrapolated to the next fifteen quarters with economic models which account for projected interest rates, inflation and three changes of government. Someone wanting to know something simple, like how a place works and how to make it work better, will find the paths to the answers only if they know the questions to ask. The resident guru is as likely to provide the lodestar as the cost accountant via his spreadsheets. Riches will flow to the organisation which can harness all the available sources of information; I assert that their discovery is at much chance and providence as it is databases and position papers. Chance becomes more important the bigger the equation. But, is anything of this new or likely to become any more important in the future? I believe not.

Our society does require better mechanisms for locating its information resources. The humanities require the same accessible tools as the exact sciences. The Australian Archives, holds every tape for every seismological survey of the onshore and offshore searches for oil undertaken in Australia or in our continent shelf. Every corporation wanting to explore the same terrain has to pay to examine those tapes. They are a very cost efficient shortcut. It is certainly a lot easier and less expensive than sending another cruiser out there, sending soundings to the deep. There is no remote equivalent for exploration of the creative arts and the humanities. I cannot imagine that there ever could be. But I do believe that simple practical endeavours are what we require.

We need a national project to undertake the exercise of indexing our major newspapers and magazines. The existing indexes of learned journals, usually according to the first word in the title or the author's surname are fairly useless. It is scandalous that we are going to spend millions on new technology for data processing when the corpus of our daily lives and preoccupations remain unindexed except through the topic specific survey by narrow focused researchers. The work of researchers is for the most part known only to them and a limited circle of colleagues. Any number of people can plough the same ground in search of the same material; extensive collections of notes, cuttings and fugitive material by researchers serve that researcher and no one else. The Australian Research Council, recognising this problem, is going to be requiring the researchers it funds with tax dollars to lodge reports on their accumulations, as well as to report on the products thereof.

Even the product of research in higher education — the postgraduate thesis — gains scant description in the hopelessly inadequate *Union list of higher degree theses*. Listing only titles according to broad categorisations of disciplines which reflect only the department which supervised the student, a researcher will discover other work of relevance only through a thorough reading of every category. Politics, for example, is likely to appear under history, anthropology, geography, social work, economics or psychology. One should temper any criticism of that work however, with overwhelming admiration that someone has made at least this much of an effort to compile and to maintain the listings.

Australia lacks truly extensive, cross disciplinary guides that embrace all of our collective institutions. Especially for original materials, manuscripts, private papers and nondigital information of all kinds, we need to know who holds what. The National Library has done exemplary work here with listings of holdings of newspapers, magazines, maps, and other summary guides. Some State Libraries have received funding for detailed descriptions of particular holdings which can provide real assistance to the researcher in locating relevant material.

But let me conclude by saying, it is doubtful that we gain anything by employing accustomed words in unaccustomed buckles to express a concept that is not itself novel. Making information accessible to everyone is a vital part of our national agenda. So is making a more effective use of our libraries and other information services. It is too vital for the future of our nation for the leadership of the library and information industries to be speaking a language which is not understood readily by ordinary people. You would not want to be in the same position as educationalists are these days, in guiding the future of education and training in our country. For what my view is worth, I cannot see the point of a discipline which employs a language which excludes any part of its potential constituency.

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Discussion

CRAM: Thank you very much Rodney. I am sure that all of you were fascinated by Rodney's examples which time and again demonstrated what Patricia had pointed out to us — that the most difficult and most important part of the information literacy process is knowing when you need information.

BREIVIK: I would like to defend librarianship — the term information literacy was not chosen by a group of librarians. The majority of the people who used that term on the original report were from education. One was from the business sector but the minority were librarians. When the American Library Association Presidential Committee initially met, the first thing we said was, 'We are going to change the term, we hate this term, it is no good. There are all these other literacies ... ' After eighteen months, that very august body could not come up with a better term. The definition of literacy itself has changed over decades and I think your Australian one — to be able to function well in society — is a very fine example. At one time if you could just write your name, you were considered literate. None of us would consider that adequate today. In that sense, since we are an information society, all we should need to say is literacy and that should encompass the ability to not only be able to read and use numbers, but also to find the information that you need to read to have a quality of life.

Unfortunately, that is not assumed and it cannot be assumed yet, so I would like to defend librarians and say they did not choose it but unfortunately they seemed to be stuck with it.

I would like to say, however, that you have said much with which I really agree. It is important for particularly those who work in universities, to get doctorates, so that they can truly understand the mind set of the academician, the joy of finding out the last little bit of detail about everything and the pleasure of having the luxury of time to go after it and do that. Unfortunately for most people, that is not what they want and you alluded to information being a commodity. Information is a commodity which is different from everything else. How many of you think it is better to have three dresses instead of one or two cars instead of one? We usually want more of most commodities. But not information. By and large people only want the least amount that they possibly need to get by for whatever issue is at hand. And I think we need to be very careful when we talk about that, because the predilection of people, other than professors, is to do with the very least.

The whole information field has changed. Everyway of researching that Rodney mentioned, the serendipitous, the joy of going through the open stacks, all of that is very legitimate. It is just that now there is much more information than we can handle and the trick is, how do you help people with limited amount of time, to investigate thoroughly the information they need, knowing that they want the least amount possible?

Technology has not supplanted the old search strategies, it is just an additional one. And while computers can never experience the joy of discovery by reading primary materials, on the other hand, some information technologies can help the legitimate needs that cannot be met otherwise. For example, there is a database now called *CARL Uncover*, which facilitates fast online access to the title pages of 12,000 journals in any of the contributing academic libraries. Is that the same as having all those 12,000 journals available to you? No. But most of our universities, most of our colleges, cannot afford to have those 12,000 journals any more. It also gives you access which was not available before. Previously if you were researching a complex subject, such as the environment or AIDS, it was through a range of different indexes if you wanted a broader picture. Most people did not want to bother to do that — just think of all the issues that would need to be investigated — the public policy issues, the medical issues etc. Using something like *CARL Uncover* you can now search across all the different disciplines to locate related items. The technology is not a replacement for the joys of the other, but if properly used, it allows capabilities that were not there before.

But anything, including consulting with one's colleagues, can be abused. For example Tofler has said that 'in six telephone calls around the world, I can find any information I want on any topic'. That is the extension of the professor consulting with colleagues. The problem is, most of us do not know those six people to call around the world, nor can we afford the long distance telephone calls. So there have to be alternatives, and that is what information literacy is about. It is not that the technology is better, or worse, or anything else. It is how we help our politicians, our economic development people, our teachers, our parents, find the information they need in a way that is comfortable for them using all the available options.

I disagree with Rodney's theory that research is restricted to particular disciplines. Information literacy skills provide a way to approach information within any particular information need, or within any discipline. The information in humanities *is* different from the scientific areas. Think of what a musician needs by way of information, as opposed to a biologist. We are not talking about *the* information, we are talking about a means of empowerment, a means of accessing that information.

People who are information literate, whether they are searching for information to use in their professional or their personal lives, have the same instinct as the researcher, after years of working with specific information, of *knowing where to go*. Unfortunately, apart from very well educated professors, the average person does not have those same instincts and what we are talking about is helping those people develop some of those instincts. But we are also talking about helping the specialist in an discipline to be able to make the connection necessary to deal with the problem where they do not know the literature. *Information literacy is about educators, government, people, everyone accomplishing what they want to do effectively.*

WHAT THE GOVERNMENT'S SAYING: INFORMATION LITERACY IN RECENT GOVERNMENT REPORTS

Anne Hazell
Chair Australian Library and Information Association Board of Education

The publication of thirteen key federal government reports during the period 1990 to 1992 highlights the importance that the government is placing on education, in all sectors. This paper provides an overview, through excerpts from these reports of their discussion and findings, and hence the implications of information literacy skills for all Australians

Australia as an information society Report of the House of Representatives Standing Committee for Long Term Strategies 1991-2 3 vols (Jones reports)

Volume 1 — Australia as an information society: grasping new paradigms May 1991

Volume 2 — Australia as an information society: the role of libraries/information networks September 1991

Volume 3 — Australia as an information society: the role of parliament in an age of executive dominance September 1992

Grasping new paradigms

pxiv Guiding principles

5 There is a pressing need to increase the community's use of information and this requires attention to the capacity of... individuals and institutions/organisations to transform information into knowledge

p4 The essential element is to enhance the community's use of information but to achieve this end attention needs to be paid to the capacity of domestic information technology to aid in collection, collation, translation and dissemination of information. The ability of individuals and institutions to access that information and to transform it into knowledge is also important and is based in the capacity of education systems to impart information skills

p26 There is also a need for people to develop an understanding of their information rights and become information literate. This could take the form of increased opportunities for students to develop information awareness and skills in a more concerted way than is currently the case in education. At the tertiary level there is a need for all graduated to have an understanding of the links between values and information as well as information handling skills. There is also a need for specific programs to be put in place at all three levels of education to develop information handling skills in students. These programs should allow for the subtle nature of information and not be equated with computer skills

The role of libraries/ information networks

p8 The economic imperative is not the only reason for stressing the importance of access to information services. Personal and national autonomy are increasingly dependent on access to information. Information is essential to enable Australians to participate fully in society, access available services and entitlements, act on opportunities, and make informed decisions which shape their lives. Therefore, essential information must be accessible to all as a factor in promoting social justice in Australia

p34 ... not to use university libraries in the development of industry is to waste a vital resource and to neglect an important sector. As a submission from the Library Subcommittee of the Vice Chancellors' Conference states

> Australian industry is information illiterate. ... Only by exploiting the total national resource will it be possible to give Australian industry a competitive edge

Recommendation 14

The Department of Employment, Education and Training fund a research project into ways that information literacy can be integrated into curricula at all levels of education including teacher education

The role of parliament in an age of executive dominance

p1 Even if members today have the capacity to be better informed than ever before, there is a feeling that they are unable to get the information they really need, cannot adequately process the information they do receive, or cannot use it effectively in the course of parliamentary deliberations

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Library provision in higher education institutions Report commissioned by the National Board of Employment, Education and Training 1990 (Ross report)

NBEET was established to provide integrated, independent policy advice to the Commonwealth Minister of Education in the areas of employment, education, training and research. Subcommittees are the Schools Council, the Higher Education Council, the Employment and Skills Formation Council and the Australian Research Council.

pvi Terms of reference

9 — The role of higher education libraries in preparing those training for the professions in information literacy

p66-71 It is thought that the concept of information literacy does not have wide currency outside library circles, where it is the subject of a considerable literature

p69 The elements of Cooperative Program Planning and Teaching, and identically for library user education in higher educations are

- close cooperation between teachers/academics and librarians must exist
- information skills need to be taught 'in context', not as they often have been, in a vacuum
- librarians have an important perspective to contribute to the teaching/learning process for they see the problems clients have in carrying out research/enquiry based tasks
- librarians have a teaching role to perform, a role that focusses on information and the skills needed to access and use it
- the skills for independent learning are fundamental to both lifelong learning and the economic and social wellbeing of our society
- the resourcing implications must be explored at the same time as the curriculum is being developed

Recommendation 3:12

That teacher training institutions consider including, in possible cooperation with their libraries, a formal curriculum element on information skills development in children emphasising the role of the teacher librarian and resource based learning

***The quality of higher education* Discussion papers Higher Education Council February 1992**

p8-9 The attributes of graduates
Generic skills. These are the skills that every graduate should be able to acquire regardless of their discipline or field of study. They should include knowing how to learn, to solve problems, to be able to think logically as well as laterally and independently, to be intellectually rigorous, to integrate information and to communicate effectively (Higher Education Council paper)

p39 FAUSA and UACA ... concur with this description of the attributes of graduates and would add that the key skill which most graduates should learn is how to manipulate a rich body of knowledge, through knowing the way that body of knowledge is structured and how it is added to (Higher education unions paper)

p71 It is possible that universities, where they do report on the capabilities of students, might do so in the areas identified in the Finn report as key areas of competence such as problem solving, personal and interpersonal skills. Such reporting, however, would not, of itself, contribute much to any assessment of quality in respect of the more complex goals of higher education. The high levels of professional skills involved in university education, the degree of specialisation and the individualised nature of university education would make it very difficult to make comparative judgements, make generalisations, or relate such reporting to generic standards or 'levels of competence' (Australian Vice Chancellors Conference paper)

***The quality of higher education* Draft advice Higher Education Council July 1992**

p22 The competency issue is also a central aspect of the broader skills formation agenda, and higher education is under pressure from this source to play its role in developing the skills base of the Australian workforce

p47 The availability of good library and information resources is essential to the realisation of the purposes of higher education, particularly those relating to the development in students of the skills of independent inquiry and criticism

***Achieving quality of higher education* Final report Higher Education Council October 1992**

p22 The characteristics of graduates
Generic skills. They include such qualities as critical thinking, intellectual curiosity, problem solving, logical and independent thought, effective communication and related skills in identifying, accessing and managing information

***Young people's participation in post compulsory education and training* Report of the Australian Education Council Review Committee July 1991 (Finn review)**

p54 The Committee explicitly limited its task to identifying the key competency areas related to a young person's initial and lifelong employability. This is a large task but it is a significantly lesser one than defining the totality of the desired outcomes of schooling and education for young people

p55 The Committee considered it important and urgent to go well beyond the simple listing of essential competencies, although getting the list right is a high priority. It is the Committee's view that the key competencies should not only be listed but should be given depth of meaning and content. The operational significance for schools and the training sector must also be made explicit.

The way to achieve this is to identify the competencies and the major strands or elements within each; develop each competency area in to a standards framework or profile; explore ways of assessing and reporting levels of achievement; and establish standards or benchmarks

Recommendations

p41-43 Australia as a nation should be committed to providing for all of its young people a program of education/training which prepares tem for life as individuals, citizens and workers now, through the current decade and into the coming century.

In recognition of Australia's needs for a more highly skilled workforce which is able to operate more flexibly and with greater innovation at all levels, a framework of nationally agreed essential competencies and standards should be established and incorporated appropriately in all education and training programs for young people

p51 VEETAC (Vocational Education, Employment and Training Advisory Committee) should consider how the key competencies might be best incorporated into the vocational education and training of adults, and whether a national target in vocational skills and competencies among adults might be a useful stimulus to achieving a better skilled workforce

p53 School programs should be coherent and incorporate the Agreed National Goals for schools and the employment related key competencies. Technical and Further Education and training programs should be coherent and broad enough to incorporate the employment related key competencies

p75-76 School systems

- integrate the key competence profiles as appropriate across the curriculum
- strengthen the 'hands on', practical dimensions of their curriculum
- give more explicit emphasis to the relevance of mainstream curriculum to the world of work
- where appropriate, and particularly in specific vocational courses, adopt an outcome/competency based approach to curriculum, teaching and assessment

p77 The TAFE training sector

- should adopt a more direct role in the development of young people's levels of achievement in all the key competencies
- should ensure that its curriculum across entry level training courses incorporated all the key competency areas of skills and knowledge in line with industry determined competency

p78 There will be major implications for preservice teacher education and ongoing professional development for school and TAFE teachers. There will also be implications for the preparation and professional development of trainers in private vocational education and training institutions and for enterprised based providers

p79 The proposed requirement for assessment and reporting on achievement against the key competence profile levels in language and mathematics by 1993 greatly accelerates the need for teachers to develop a general understanding of standards frameworks and criteria referenced assessment practices

All teachers will need a general understanding of the training sector's emerging emphasis on competency based assessment. Those teachers involved in school based, specific vocational courses seeking full credit transfer into the training sector, will need to be skilled in the design and delivery of competency based assessment.

Ability to handle the new requirements is likely to take individual teachers in all sectors into new work organisation relations of their own so as to effectively manage learning outcomes and this will bring the practice of key competencies into their own work

p80-81 AEC (Australian Education Council) and MOVEET (Ministers of Vocational Education, Employment and Training) should refer the relevant proposals from this review to both the National project on the Quality of Teaching and Learning and to the VEETAC Working Party on TAFE Staff and Related Issues with a brief to

- identify the immediate implications for professional development of teachers in the school and TAFE/training sectors
- identify implications for initial preparation of teachers in the school and TAFE/training sectors
- develop strategies to support teachers in the pedagogical and curriculum changes resulting from the Committee's proposals

Governments should ensure adequate professional development funds are available to the schools and TAFE sectors for the successful implementation of the Committee's proposals

Key areas of competence addressed by the report are

Language and communication
  - speaking
  - listening
  - reading
  - writing
  - accessing and using information

Mathematics
Problem solving
Science and technological understanding
Cultural understanding
Personal and interpersonal

***The Australian vocational certificate training system* Report of the Employment and Skills Formation Council March 1992 (Carmichael report)**

p14 The emerging convergence of general and vocational education and of work and learning were noted in the Finn report. General and vocational education, and work and learning, are too sharply divided in traditional Australian attitudes and practice. They must in future be seen as closely related, because of changes in the way industry operates

p16 Vocational certificate training should build on a foundation of competencies acquired through general education. ... the (six) key areas of competence identified in the Finn report are threshold competencies, on which vocational and enterprise specific skills can be built. This does not preclude acquiring general competencies in contexts outside the school system. It rather reaffirms the importance to individuals of gaining these competencies to enable them to go on to further training and it reaffirms their inherent nature as a public good or benefit

p26 The Finn report's generic key areas of competence are intended to underpin the eight level Australian Standards framework. Much remains to be done to develop these relations in practice. Once they have been developed, the industry parties will be able to define more precisely their expectations of education and training in terms of levels of generic and vocational competencies, and links between education, training and work will be clearer

p71 The key areas of competence define the generic competencies that underpin core vocational and occupationally specific competencies. The key areas of competence can be taught in the context of vocational education and training as well as in more general ways

p142 In developing the AVCTS, priority should be given to

- the development of national competency standards related to the Australian Standards Framework
- training of teachers and trainers in the delivery and assessment of competency based training

p147 The key areas of competence will be addressed by the Mayer Committee. A very high priority will need to be given to the development of appropriate materials to support the learning of the key areas of competence, or this will suffer unacceptable delays.

The key areas of competence will also have significant implications for the professional development of many teachers and trainers

Recommendation 2

... all education and training pathways in the Vocational Certificate Training System should provide for the attainment of the generic key areas of competence specified in the Finn report

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Committee to advise the AEC and MOVEET on employment related key competencies for post compulsory education and training (Mayer Committee)

Mayer report 1 — *Employment related key competencies for post compulsory education and training: a discussion paper* Report to the Australian Education Council and the Ministers of Vocational Education, Employment and Training February 1992

Mayer report 2 — *Employment related key competencies: a proposal for consultation* Report to the Australian Education Council and the Ministers of Vocational Education, Employment and Training May 1992

Mayer report 3 — *Putting general education to work: the key competencies report* Report to the Australian Education Council and the Ministers of Vocational Education, Employment and Training November 1992

Mayer report 1

p2-3 The Finn Report identified six areas of employment related competence. Each area of competence will consist of applications of knowledge and skills in the workplace context. Each application will be referred to as a competency and will be accompanied by a statement of criteria for judging achievement for the competency. Within each area, competencies will be sorted into unified and conceptually discrete strands. Competencies will be arranged in order of difficulty within strands. This will enable the identification of a range of performance standards, each consisting of a gourp of competencies of a similar order of difficulty. The resulting matrix will be called a key competency structure

p14 Workplace language and communication
This strand involves, for example

- Collecting, analysing and organising ideas and information
- Expressing information and ideas to others
- Interacting with others one to one
- Working in a team

Collecting, analysing and organising ideas and information
This strand involves, for example

- defining the purposes and audience for which ideas and information are collected
- being able to find and use a variety of sources o information
- choosing appropriate means for collecting and organising information
- organising information clearly and logically
- interpreting and analysing information and ideas
- selecting appropriate information and ideas and evaluating their suitability for use in a particular context
- transforming information or ideas from one form to another

p15 Expressing information and ideas to others
This strand involves, for example

- a critical understanding of the meaning and purpose of communication
- choosing appropriate means to express ideas and information
- recognising the demands, expectations, culture and background of the audience or recipient
- responding creatively to communication demands
- demonstrating presentation skills
- evaluating the effectiveness of communication
- recognising one's own communication strengths and weaknesses

Mayer reports 2 and 3

The key competencies were further developed through a process of consultation and in response to submissions provided to the committee from the education community. In summary form the key competencies were expressed as

Key competencies for effective participation in the emerging patterns of work and work organisation

- Collecting, analysing and organising ideas and information
  The capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it

- Communicating ideas and information
  The capacity to communicate effectively with others using the range of spoken, written, graphic and other nonverbal means of expression

- Planning and organising activities
  The capacity to plan and organise one's own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance

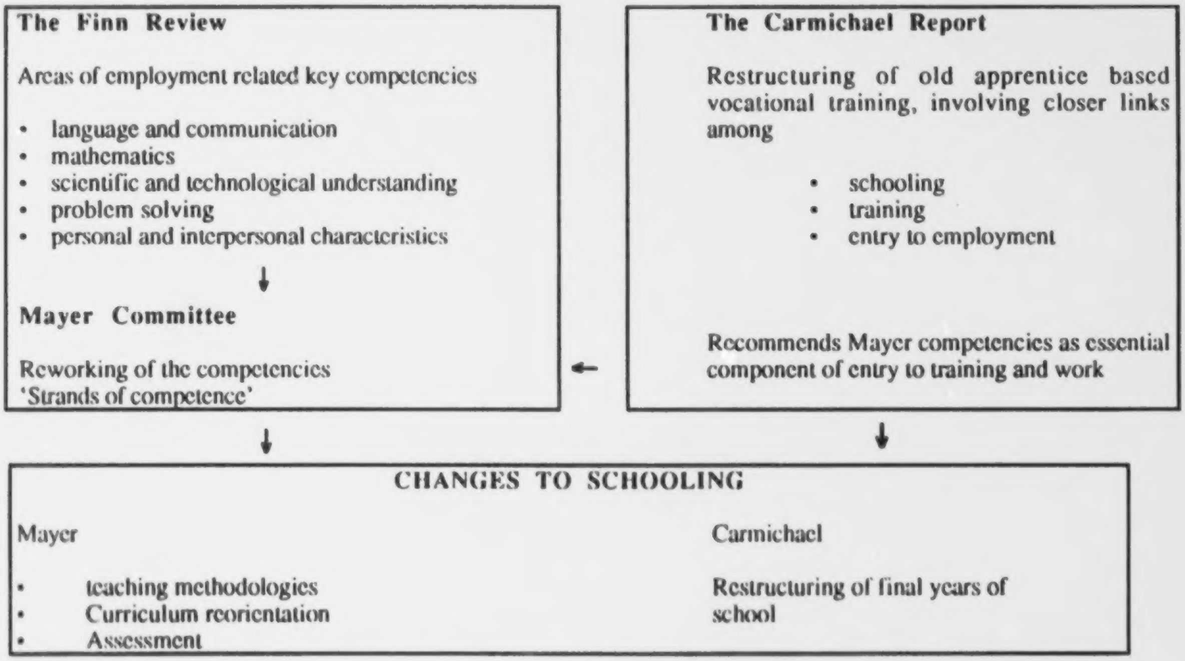
- Working with others and in teams
  The capacity to interact effectively with other people on a one to one basis and in groups, including understanding and responding to the needs of a client and working effectively as a member of a team to achieve a shared goal

- Using mathematical ideas and techniques
  The capacity to use concepts such as number and space, and techniques such as estimation and approximation for practical purposes

- Solving problems
  The capacity to apply problem solving strategies in purposeful ways, both in situations where the problem and the desired solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome

- Using technology
  The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems (*Putting general education to work* p3)

The relationship between the Finn, Carmichael and Mayer reports and their findings can be illustrated in the following diagram



The Finn Review

Areas of employment related key competencies

- language and communication
- mathematics
- scientific and technological understanding
- problem solving
- personal and interpersonal characteristics

Mayer Committee

Reworking of the competencies
'Strands of competence'

The Carmichael Report

Restructuring of old apprentice based vocational training, involving closer links among

- schooling
- training
- entry to employment

Recommends Mayer competencies as essential component of entry to training and work

CHANGES TO SCHOOLING

Mayer

- teaching methodologies
- Curriculum reorientation
- Assessment

Carmichael

Restructuring of final years of school

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WHAT'S HAPPENING?

Panel presentations

- **Schools**

  Paul Lupton
  Lecturer, School of Language and Literacy, Queensland University of Technology

- **Higher education**

  Gerry Mullins
  Assistant Director, Advisory Centre for University Education, University of Adelaide

- **Technical and Further Education**

  Chris Harrison
  Associate Director, Regency College SA

- **Public libraries**

  Jenny Cram
  Manager Library Services, Department of Education Queensland

- **Workplace education**

  Robert Bean
  Manager, Workplace Education Services, Adelaide College of TAFE

- **Industry/business**

  Marilyn Harlow
  Manager, Research Small Business Corporation

THE SCHOOL PERSPECTIVE

Paul Lupton

Lecturer, School of Language and Literacy, Queensland University of Technology

Introduction

Schools represent the second stage in the education of our children, a point recognised by many schools which actively encourage involvement by the first educators, the parents and the community. This partnership lays the foundations of an education upon which the post compulsory levels build. It is my aim to illustrate the contribution schools make to the development of information literate students. I plan to outline briefly some history; pertinent points arising from national documents; effects of the recent changes to the management of schooling; and to express some thoughts on a way forward.

Some historical background

Since the early 1970s, Australia's state and national education authorities have recognised the increasing influence of information on society and the need for students to acquire information processing skills. Government and nongovernment schools began to receive funding for purpose built libraries and for collection development, while courses began in most states for the training of teacher librarians — experienced teachers who have undertaken further studies in librarianship to obtain dual qualifications. During this time curriculum documents have included increasing references to information processing skills and recognised the place of resource based learning as a means to acquire these skills.

History will record that until the mid 1980s, school libraries were at a high point in terms of funding and staffing and received high levels of advisory and support services from each of the education systems.

The influence of recent national documents and other material

At the national level there has been unprecedented cooperation between schooling sectors, technical and further education (TAFE), higher education, union and employer representatives. As Anne Hazell has outlined in a previous paper, this cooperation has led to the publication of several landmark documents. These publications are set to profoundly influence curriculum development for all sectors of education. I would like to note some aspects which address information literacy in schools.

The *Common and agreed national goals for schooling in Australia*[1] published in 1989 by the Australian Education Council contains several goals which implicitly or explicitly highlight the need for information literacy by students. At least four of the ten goals will require students to be information literate in order that the goals are achieved.

The Mayer Committee with representatives from all of the sectors mentioned above built upon the recommendations of the Finn Report. The Committee has adopted key competencies some of which will contribute to student acquisition of, or require the use of, information literacy skills. The particular competencies are

- collecting, analysing and organising ideas and information
- expressing ideas and information
- solving problems
- using technology

Similarly, the Carmichael Report contains recommendations on a set of essential learnings and key competencies for students irrespective of their chosen pathway.[2]

It is interesting to note that several state education authorities had recognised already the need to determine a set of core skills for all students, regardless of their course of study. In some states these skills are being called essential learnings and can be termed the new basics required for employment, further study and responsible citizenship. For example, South Australia has developed a set of nine essential skills and understandings on which to base students learnings. These essential learnings are

- communication skills
- social skills
- planning and design skills
- information skills
- environment skills
- mathematical skills
- health and safety skills
- technological skills
- work skills

At a more specific level, schools can access several excellent productions to help them in the task of developing school wide policies and practices with regard to information skills. These productions began in 1984 with the Tasmanian publication of *Teaching students how to learn: ideas for teaching information skills.*[3] Several states have also supported this work with telelearning packages to be used for school based professional development. There is now an extensive range of publications or packages which can be purchased from education authorities, state school library associations and commercial publishers. *It would be instructive to ascertain how many education faculties incorporate this kind of materials in their preservice courses for teacher education.*[4]

Consequences of recent decisions by education authorities

Economic rationalism is a term with which we are all too familiar. It is hailed as either the cure or the creator of all ills, depending on who is speaking or writing. My perspective is concerned with decisions which enhance student learning outcomes. *The creation of information literate students requires much higher levels of resourcing than those experienced by us in our schooling, and certainly by those currently making decisions at the systems' levels.*

One outcome of economic rationalism has been a process of restructuring organisation and the decentralisation of decision making. The concept of school based decision making is beneficial for student outcomes provided there are several givens associated with the process. What I see is a process which has removed most givens, especially in relation to services which impinge upon the information literacy levels of our students. While I recognise that school based decisions address priorities determined by the school community, there must also be the requirement to address system priorities which are in turn supported by the system itself.

From information supplied by colleagues from each state it is evident that state education authorities have downgraded support for the information related aspects of schools through the cessation of such things as: specific funding for school level information services; reductions in staffing levels for school library resource services and to advisory and support services; and in some states, the withdrawal of support for the training of teacher librarians.

It is to be hoped that once the recommendations from the Mayer Committee are accepted that these recommendations will receive priority and be sufficiently supported.

The reports being discussed in this forum recognise information as one of the important resources for human activity. Indeed, at the conclusion of the Jones Report[5] the following statement is made

> ...access to information through the library system is the nub of the information system. It is as important to our development as our port facilities, our transport systems, our banking system

This being the case, the skills of information literacy will need to be integrated into school based curriculum development, program delivery and resourcing.

With further regard to resourcing education I would like you to consider the following anomaly regarding the levels of resourcing in schools.

Much of the response by education authorities to the employment and higher education needs of students seems to be directed at the post compulsory years of schooling. If the education of our children is seen as being a cumulative process, then each successive level uses the previous one as its foundation. For students to experience continuing development and success, each level of schooling needs to be a strong as possible. One has to ask then, why are primary and junior secondary schools often the poor relations of their senior schools or colleges?

A way forward?

The addage 'working smarter not harder' seems particularly appropriate. This concept should be considered at all levels of decision making. The integration of provision for information literacy does not mean yet another addition to an already overcrowded curriculum. It is well established that modelling is a very powerful teacher.

As information literacy is a prerequisite of successful human activity, I suggest that all decision makers must develop an understanding of what it means to be information literate and then, in turn, to develop structures and practices which place priority on developing information literate students. This process needs to start and be seen to be occurring at the system level.

Each education authority has established a set of essential learnings which have been mirrored in the recent national reports. These essential learnings are not curriculum specific. Therefore, at both the system and school levels, essential learnings require the adoption of policies which ensure integration of the skills into all curriculum programs. This requires changes in systems and school structures such that subject barriers disappear. At the secondary school level this can be achieved by the cooperative writing and implementation of cross curricula units which emphasise the acquisition of the skills of information literacy. This integrated approach is well understood at the primary school level.

All schools need to develop skills continuums which translate the sequential and developmental nature of the acquisition of skills. In turn, schools need to determine how these skills are learned and evaluated. That is, what strategies are good models to be used and what performance indicators are appropriate? With regard to performance indicators, the Mayer Committee's final report will provide examples for guidance.[6] There are also inclusions in the drafts of national curriculum documents that I have sighted.

There is no easy way to achieve change. Change in schools requires both individual professional development and a team approach to the learning process. My experience, gained from studying this developmental process in schools, is that it will take several years. Thus, support and patience will be required at the systems level and by any future accrediting agencies.

Partnerships are an important feature in those schools where skill development in students is a high priority. Strong partnerships will exist between the school administration team and the teaching staff. Similarly, effective partnerships will exist between the specialists and their colleagues.

Strong communication links need to be established also between the different levels of schooling and the other education sectors to ensure that our students continue to develop their skills of information literacy with a minimum of disruption between each level and sector.

Conclusion

In this brief presentation I have illustrated that school systems are addressing aspects of the information literacy needs of students. I have indicated ways schools could proceed to plan and implement curriculum programs which develop information literate students. I have also expressed concern about the adequacy of the support for information literacy as a priority for our students.

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HIGHER EDUCATION

Gerry Mullins

Assistant Director, Advisory Centre for University Education University of Adelaide

The conference brochure sets out several aims which this conference hopes to achieve. My intention in this paper is to indicate some factors and issues which will affect the extent to which the conference can achieve its aims. To focus my remarks more precisely I will concentrate on the last of the conference aims, 'To identify the agenda for change needed across the education and information sectors to raise the level of information literacy'. To what issues in higher education do we need to pay attention in order to develop a successful 'agenda for change'?

Readers of *Campus review weekly* and the *Higher education supplement* in *The Australian* will be aware of the extensive changes occurring in higher education in Australia. Some changes have caused anger, demoralisation and turmoil in academic staff and their institutions. However, there have also been changes for the better. There is an increasing recognition that teaching as a function of the universities is to be valued as much as research. We are seeing a shift from higher education for an élite section of society to wider and more equitable access for larger numbers of the community. Acceptance of evaluation as a guarantee of quality is gaining ground. What I wish to argue in this paper is that the dramatic changes occurring in higher education, especially since the Dawkins *White Paper*, create both problems and opportunities for our agenda for change in respect to information literacy. Success will depend on how well we are able to deal with the problems and to seize the opportunities. Success will require fine judgement and considerable sensitivity.

It may help our discussion to look first at students and the way in which their situation is changing, then at university staff, and finally at the point where students and staff meet — the teaching/learning context.

The most noticeable fact about students is that there are so many of them! In some disciplines the buildup has been gradual over several years, but in 1991 and 1992, many departments have seen dramatic increases in student numbers in lecture theatres and tutorials. First year enrolments of over 500, in some cases of over 1000, are not uncommon. Tutorial classes, which a few years ago were a barely manageable 15, are now over 20, with the result that small group teaching, in the traditional sense, is no longer a practical option. These rising student numbers and deteriorating student:staff ratios place severe limitations on what changes can be introduced in universities. They affect access to facilities such as libraries and computers and, most important of all, they limit the access of students to staff.

Students are not only more numerous, they are more diverse. As a result of the impact of access and equity policies, we are seeing students from a wider range of schools and socioeconomic backgrounds, more mature age students and more women in nontraditional disciplines such as engineering. University budgets now depend on fee paying overseas students, and there is a push to develop postgraduate courses which will attract both Australian and overseas fee paying students. The flurry of amalgamations has increased further the diversity of the student body by bringing together in fewer institutions the wide range of courses previously offered by the colleges of advanced education and the old universities. Student diversity pressures universities to examine traditional courses and methods, and to reconsider appropriate goals and approaches for university study.

However, the changes in students are more than demographic. Students now come to university with a different preparation. The Victorian Certificate of Education has been in the news more than the postsecondary curricula of the other states, but several states are developing curricula designed more to meet the needs of their increasing diverse Year 11-12 students than as a preparation for university study. These curricula, incorporating as they do more variety in modes of learning and assessment, might be expected to produce students with a more sophisticated approach to knowledge and learning.

The introduction of HECS and fees is leading to consumer pressure from students. Quite rightly, they see themselves as paying clients of their institutions with consumer rights. Institutions have responded to those pressures with the development of codes of practice (eg the AVCC Code of Practice for Overseas Students), and widespread use of student evaluation of teaching.

Finally, the students are reacting to the state of the economy. Their motivation for coming to university is 'Jobs, jobs, jobs!' However, at the same time, they must come to terms with the fact that their university study may not result in a job in their chosen field. These conflicting motivational pressures affect the way students approach their study.

These changes in the composition and approach to tertiary study of the student body have implications for the 'agenda for change' proposed by this conference. If we wish to develop information literacy in our students, we need to be aware that we are dealing with mass higher education of a diverse clientele preparing for a tough job market. The receptiveness of students to what we have to say about information literacy will depend on the presentation of these ideas in a context which matches students' perceived needs.

If students are changing, staff are in turmoil. Morale among academics is low as staff feel they are being asked to do more — to teach larger numbers of student and to teach them more effectively — but with fewer resources. Staff in many disciplines, especially in the humanities and in the liberal studies areas of science, feel that their work is not valued because it is not seen to have vocational or short term economic value.

Academics are subjected to unprecedented scrutiny. Annual appraisal, albeit for developmental purposes, is now part of the industrial award. Student evaluation of teaching is now extensively used, and sometimes required. Quality assurance procedures are being put in place with a view to full scale operation in 1993-4. Departmental and discipline reviews are regular features of university life.

Academics are now forced to think of themselves as part of an industry, one which is undergoing radical restructuring. Amalgamations, industrial awards and reclassifications are part of this process.

Demoralised, devalued, industrialised and scrutinised — is it surprising that the reaction of many academics to these stressful conditions is anger or despair? But it is not all doom and gloom. In the face of resource cuts, Australian academics have raised their productivity to an extent that would be the envy of most industries. They have taught larger number of students despite static or failing resources, and there is no evidence that the quality of our graduates has declined.

In this unfavourable climate there has developed a recognition of, and attention to quality teaching. This substantial and important shift in university values is indicated by: increased time devoted to professional development in respect to teaching and learning; acceptance of student and peer evaluation of teaching and the incorporation of such evaluations in promotion processes; substantial resources devoted to language and learning support for students; and ambitious and innovative curriculum development.
Teachers in higher education are reacting to the pressures of industrial restructuring in two quite different ways. Some academics plead for a period of stability and consolidation, 'Please leave me alone to get on with my teaching and research'. Others have realised that they cannot

continue to cope with an increasing workload and decreasing resources without radical change; a complete rethinking of what they are trying to achieve in higher education and how they might do so.

The 'agenda for change' proposed by this conference must find a voice within this context. There is no point asking academics to do more, to take on more teaching. However, if we are able to suggest ways in which they might teach more effectively, then we do have a receptive audience. The approaches to teaching and learning, encompassed by information literacy do have the potential to help teachers to do their work more effectively.

This leads us to the point where academics and students interact; the process of teaching and learning. I will emphasise changes occurring in teaching and learning, rather than attempt to maintain the status quo, because of the implications these changes have for information literacy. I shall list several developments which illustrate the changes occurring in teaching and learning and indicate the opportunity for an 'agenda for change'.

I have had discussions over the last four weeks with teachers of architecture, dentistry, economics and medicine about the development of problem based curricula in these disciplines. The paradox is that despite resource constraints, teachers in this wide range of disciplines are prepared to invest extra effort in the development of this new approach and to accept the considerable workload involved in a problem based curriculum. Why? The incentive to change is similar across all four disciplines; a recognition of the need to integrate theory and practice; a determination to make tertiary learning relevant to professional practice; an effort to engage students' interest and encourage their independence. An overarching goal is to teach students how to think like an economist, an architect, a doctor, a dentist, that is to acquire that literacy specific to particular disciplines.

Information literacy and computer literacy are closely related, as several speakers at this conference have already noted. It is encouraging to see the shift in discussions of computer aided learning (CAL) from a preoccupation with technological wizardry as a quick fix for teaching/learning problems to a more sophisticated integration into broader curricular developments. Similarly it is encouraging to see the shift in distance education from a simple packaging of existing teaching material to the careful design of material to suit the needs of offcampus learners. Indeed so successful have the 'distance education' people been that their courses are often see as examples of best practice in teaching.

Quite a different perspective on teaching and learning is provided by the development of sophisticated theories of learning in the tertiary education context. Until recently our understanding of *how* students at university learned was limited, but the 1980s and 1990s have seen the emergence of formal theories which have been developed specifically for tertiary students and as such provide a powerful framework and language for the analysis of learning. These theories emphasise the identification of learning goals, the development of independence and the importance of reflection and integration in the learning process. Along with this improved understanding of learning is a greater appreciation of the relationship between language and learning. We now recognise discipline specific use of language and use the concept of 'literacy' in the same broad sense in which the word is used when we talk of 'information literacy'.

I have described several developments in the area of teaching and learning. There are many others, and my point is that universities are full of exciting new ideas about teaching and learning — despite the enormous resource difficulties affecting higher education. The development of independent, motivated and reflective learners is being attempted more seriously than ever before, and in so many different ways.

My overall conclusion to this paper is that the proposal for an 'agenda for change' as regards information literacy comes at a critical time in higher education. For some academics and institutions suggestions for change will be see as only one more pressure, distraction or threat. But there are many people in higher education who recognise that the problems and pressures in higher education can only be dealt with by responding to change in new and imaginative ways. The success of our 'agenda for change' depends on our ability to show that the development of information literacy is part of one answer to the challenges facing university teachers and students. We need to convince teachers and students that the ability to recognise what information one needs, to locate and evaluate that information and the ability to use it effectively to learn is critical to effective teaching and learning in today's university.

TECHNICAL AND FURTHER EDUCATION

Chris Harrison
Associate Director Regency College of TAFE

Information literacy has been discussed and brought forward as an important issue for many years by those who are pioneering the educational vision of TAFE Learning Resource Centres and Libraries.

The concepts of 'library skills' and 'bibliographic instruction' however have prevailed but have not been successfully implemented, that is integrated throughout the curriculum with full cooperation of teaching and library staff. Why?

Because we do not understand the concepts ourselves.

People who work in libraries and who lead the profession of librarianship have not been successful in advocating either information literacy or the roles that information and libraries can serve in its achievement.

> Ernest Roe said in 1971 that many subscribe to the independent self propelled adult as an ideal, but nobody has told teachers (or librarians) how to go about making it a reality. As we enter the 1990s, that ideal of the 'self propelled adult', the individual who has learned how to learn, is if anything much more firmly established in educational thinking. There is greater readiness to consider encouraging students to become self reliant learners, able to take responsibility to a significant extent for their own learning and development. Almost two decades on however, are we better able to suggest how it can be made a reality?[1]
>
> Preparation for effective advocacy includes librarian and library clarity, the ability to articulate this simply and effectively... Libraries today need a clear educational rationale, a purpose far broader and creative than the old caricatures which die so hard, a purpose which is clearly aligned with student learning outcomes[2]

As this panel session should simply describe the current scene and, in time, serve as a benchmark against which progress of the nature prompted by Ernest Roe can be measured, the answers to the questions I put to a sample of each state's TAFE librarians provides a focus for this presentation. The questions were

1 Do your state's curriculum documents include

- competencies/modules which explicitly address the transfer of information literacy competencies/skills?

  Are you able to provide some examples?

- are information literacy competencies implicit in other learning outcomes?

2 Describe action being taken by Learning Resource Centres or Libraries in your state, or by your library network, to support information literacy programs

The messages and reports are mixed.

Some reflect the culture of TAFE depicted by statements made by a former head of a state TAFE systems to the Kangan Committee *...TAFE students did not read so did not need much* *in the way of libraries...* Others on the other hand support the contemporary response to the opinion expressed in Patricia's paper this morning *...the quality of a college is measured by the resources for learning on campus and the extent to which students become independent self directed learners...* and the directions of the Mayer Committee, that

> Key competencies ...focus on the capacity to apply knowledge and skills in an integrated way in work situations (but) ...are not only essential for effective participation in work but are also essential for effective participation in further education and in adult life more generally[3]

The comments included

...we do not believe that our curriculum documents contain a specific module on information skills

...unable to locate any current examples of course outlines which train students to develop these skills

...we provide orientation tours and subject specific exercises to aid teachers to introduce their students to the library

...sorry I have not really got much to report

...no information literacy competencies in curriculum documents

How can students become self directed learners and information literate if educators and librarians alike have failed to recognise that information literacy skills are skills that must be learnt and practised?

What is required to change this direction? In future we should evaluate our progress against the level of

- partnerships in curriculum development, particularly in integrating the 'key competencies'
- methodology change; from teacher to learner centred
- staff development for teachers and all library staff
- ethos and cultural change in both the institution and its library. Librarians must see their roles more clearly to be that of educators. Other educators must learn to recognise this through repeated demonstration by library staff of their educational skills and contribution to the achievement of student learning outcomes
- lobbying so that libraries and their staff have the resources to perform this role; adequate resources and information services to establish the desired learning culture and environment in the library and its parent institution

Why would you want to use a TAFE library at the moment anyway — there is every good reason for its lack of inclusion in the learning process.

The culture was set by that former TAFE system head back in the 1970s; which so innocently and so easily has affected the role of libraries and their resourcing levels since then. The task ahead is to break the image of two decades. It is an urgent task that must be completed quickly so that the emerging contemporary vocational education and training system is based upon better information foundations. The enormity of the educational change is not understood by either partner; teachers who are under pressure to change delivery methods, content, working conditions, and library staff who must change their own perceptions of their roles before any demonstrated progress can be forwarded to others.

Some initiatives

It would be unfair, and not true, to reflect a picture of stagnation or retreat. Many do recognise the change that is required and are taking action. A consolidated view of this action must be described so that strength and encouragement to proceed is portrayed

1 Information literacy and other formal learning programs. Each state has identified, in various forms, the need for both structured programs in information skills and the need for extensive staff development to achieve any progress. A number of kits have been developed for this purpose; LARK (NSW), Learning Services (SA), Lifesaver (Qld)

2 Improved levels of learning resources. The National TAFE Section of the Australian Library and Information Association has begun a lobbying program and as a consequence has developed materials to promote the rationale for information literacy as an integrated part of vocational education and training and to redress the current paucity of resources in TAFE libraries

3 Key competencies. A significant research project has begun at Tea Tree Gully College (SA) to investigate strategies for the assessment and integration of key competencies into TAFE courses. The manager of the Learning Resource Centre has taken the lead in the initiative, modelling the educational role of library staff

4 Partnerships in curriculum development and the identification of learning resources during the development of curriculum. NSW, SA and the ACT report significant progress in this important area of putting learning resources in the right place! The curriculum design stage must include indentification of appropriate learning resources and allow opportunities for the recognition of the information and learning skills which must be incorporated into learning outcomes. Documents such as the *User's guide to course design for competency based curriculum* [4] open the door for all library staff to develop partnerships in curriculum processes

5 Open learning and competency based training have provided similar opportunities across the nation. The *National metals and engineering curriculum* attracted additional funds for learning resources and the inclusion of learning skills to support self paced learning; the *National staff development in open learning* modules will include sections on library functions and roles and learning resources. Implementation of both open learning and competency based training methodologies have provided opportunities for librarians to focus their discussions with teachers and curriculum designers on learning skills. As teachers move to facilitating these learning opportunities, the recognition of partnerships and team approaches to that facilitation will become evident. There are numerous examples of success in this area. TAFE-TEQ has published widely the results of the significant work in Queensland. More publishing and recognition of the kind that Queensland has received is needed to assist all Australian TAFE libraries to become a visible part of, and contributor to, educational initiatives

6 Changing the concept of 'the custodian' to 'a manager' of resources. Efficient management and access to resources is an imperative of competency based training and flexible delivery. Several states have investigated new ways of managing resources and the initiatives in NSW, SA and the NT each have resulted in a new focus for the library's role. A focus not just on the management of resources, but also on the importance of information finding and access skills by the learner

There is a fundamental issue in all of this. TAFE library staff must do more than promote the rhetoric; they must create and demonstrate it! To paraphrase a quotation from TAFE in the

1990s — TAFE *library staff* must do more than just help to develop the systems of vocational education and training

> They must put into place a vision of how the growing competence of our community will transform the workplace culture, attitudes and practices needed for our economic survival[5]

There is a central place in the vocational education and training sun for library staff. This conference is a wonderful initiative but the challenge is that we must review our progress to keep us all honest in honouring our commitment to the Australian community.

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PUBLIC LIBRARIES

Jennifer Cram
Manager, Library Services, Department of Education Queensland

Robert Heinlein could well have been composing a mission statement for public libraries when he wrote

> A human being should be able to change a diaper, plan an invasion, butcher a hog, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, pitch manure, solve equations, analyse a new problem, program a computer, cook a tasty meal, fight efficiently and die gallantly. Specialisation is for insects![1]

While other libraries may have the luxury of expecting a certain level of competence in library use from their users, public libraries do not, and should not.

Public library users and potential users come in all sizes, shapes, ages, and competencies, and not all public library users want information. Entertainment, inspiration, a focus for an outing, and an opportunity for human interaction are all perfectly legitimate purposes of the public library and for public library use. That is not to say that information and access to information are not important purposes too.

Public librarians in Australia do not yet agree on something as simple as that. Even a formal attempt by New South Wales to reach agreement on the role of the public library merely demonstrated yet again the division between those who primarily see themselves providing an informational role and those who describe their role in terms of recreational reading materials.

Perhaps I can put the role of the public library in information literacy into perspective in a way that will satisfy both parties.

I believe that the prime role of the public library is to empower. Self esteem, the critical competency, about which we have heard little or nothing in the current debates, is very much linked to empowerment — empowerment raises self esteem, and self esteem is empowering. Increased competency in any area has a halo effect, contributing to self esteem.

Ergo, any contribution the public library can make to increasing the competency of its users in any aspect of their lives, also contributes to the achievement of the library's primary purpose.

The Mayer Committee recognised the importance, in developing employment competencies, of the ability to access information. It also recognised that this competency is not only essential for effective participation in work but also for effective participation in other social settings.

Yet the importance of library skills is mentioned only in passing when the Mayer Committee remarked that the process of collecting, analysing and organising ideas and information can include matters 'as simple as accessing a library book'.

As the Australian Library and Information Association submission to the Mayer Committee stated

> This statement may be symptomatic of the general misunderstandings that are prevalent about modern library practices. Accessing a library book is not necessarily simple: it may involve, for instance, the ability to find required information in a library catalogue, whether

in card, fiche or online format, the ability to identify and use major bibliographic components of item descriptions, such as author, title and call number, and the ability to undertake a simple subject search.[2]

However, public librarians must ask themselves whether the complexity of libraries, the difficult way in which they provide information is one of the reasons special skills are now needed. Librarians must be noticing the gap between the skills members of the public bring into libraries and the skills libraries demand of them to make use of their collections. Certainly the complexity of information forms and systems as well as the problem of mass and rapid changes in technology are forces behind the information literacy campaign. The need for users to be more sophisticated is indicative of failure in service delivery which is at odds with the rhetoric of user friendly delivery and the service ethic preached by librarians.

To put it simply, are we now embarking on this information literacy campaign because we are approaching the problem of the complexity of libraries by believing the answer is to adapt generalised human behaviour to the idiosyncrasies of libraries? The public library cannot abrogate its responsibility to make its practices and language both relevant to people and generally understandable.

As an integral part of trying to foster information literacy in users it is critical that we correct our internal problems. Public libraries must streamline and simplify, and improve delivery capabilities.

When I asked a nationwide sample of public librarians to give me information on what was happening in their geographical area in relation to information literacy I got a consistent response. Embedded in the descriptions of what libraries and librarians were planning, doing and experiencing is the clear message that librarians have to improve their own information skills. Our users' needs are becoming more complex and sophisticated though their ability to negotiate the complexities of locating and accessing information may not be well developed and there is an increasing demand that public libraries should not only supply raw information but also analyse and select appropriate resources.

The substantive aspects of information literacy require an even better trained, better educated, and extra library experienced profession so perhaps the first step the public librarian can take in improving the information literacy of the public, is to improve her own.

The second step is to take a leaf from Mrs Beeton's recipe for jugged hare. It begins, 'First, catch your hare.....'

Access

Across Australia public libraries are instituting a range of measures to provide people with improved access to libraries and to information.

Western Australia is increasing the number of its school/public joint use libraries which it is hoped will increase access to information for both the students and the public, and is instituting regional information networks.

In the Great Southern Region, a joint project involving local authorities, state, and federal bodies, provides in small country libraries, information on TAFE courses, regional and state level community and government service information.

And the South-West Metropolitan Local Authorities Management Group in Perth is working towards developing a regional community information service for the region. A grant has been obtained from the State Lotteries Commission to engage a consultant to examine and report on the feasibility of establishing this regional community information service.

Of course, sometimes it is not so much a case of catching your hare as of fielding it. Comments from the State Library of Tasmania must sound very familiar to public librarians all across the country.

> Particularly at the secondary level, but also at the primary and tertiary levels, students are using public libraries to supplement shortfalls in their home (sic) libraries. With an increasing emphasis on assessment based on individual research, secondary students are increasingly using the public libraries for assignments and projects. These students are often unfamiliar with basic research methodology and library skills and require considerable assistance with complex and specialised subjects.[3]

Views of public librarians on student use of libraries vary from 'how can we get money to compensate us for serving students?' to 'how can we stop students coming in?' to 'we are here to serve all comers and students are our future library clients'.

Reports of studies on secondary school usage of public libraries, conducted in New South Wales in 1990, and on library usage by secondary students conducted in Victoria this year, support the observation that use of public libraries for curriculum related purposes is increasing.

Victoria has responded to this in several ways

- In an initiative funded by the Ministry of Education, six teachers have been appointed until the end of 1992 to positions in libraries to liaise with staff and students on VCE related matters.

- Cooperative grants are enabling the creation of better links between public libraries and school libraries — including data links, fax machines, and reader education projects

- More public libraries are looking at library orientation sessions held at the start of the year to increase student awareness of library services and what can and cannot be done. However, Dandenong Valley Regional Library Service reports that the response from students has been inconsistent.

Public libraries have not prepared for the impact of Open University and changes in TAFE provisions. It seems inevitable that students of open learning will descend upon public libraries. *Reduced funding forces cross sectoral interaction.* But cross sectoral interaction can overload some services and reduce services to 'legitimate' clients.

Comments were also made that since public libraries have automated their systems, speed of delivery and accuracy of information has increased. This raises clients expectations that every service or resource has improved but funding has decreased. These raised expectations cannot always be satisfied. The introduction of online and dialup facilities and CDRoms has also raised client expectations of the breadth and depth of information which can be delivered.

There is increasing demand on public libraries to provide more tailored services to such groups as business, community organisations, genealogists. These clients have complex and sophisticated needs and an expectation of timely appropriate service delivery.

This demand for more tailored services is an indicator of something which is not being overtly addressed —in 'improving' access to information we are creating a library environment which will result in a higher level of anxiety and confusion for users. Maximizing retrieval can lead to information excess which can lead to intellectual distress. A study in 1988 found that end users would commonly abandon the search for information entirely if provided with more references than they were willing to scan.[4]

Despite the increased capacity to service people with disabilities that has been conferred on all libraries by technological improvements and a widening of the range of formats in which information is available, service to people with disabilities does not seem to have a high priority.

In the public library context 'People with disabilities' should be defined as including families and carers as well as the individual with a disability — all of whom have differing information needs. People with disabilities need access to both the same information as nondisabled people as well as requiring specific information relating to disabilities. Even in public libraries, access for people with disabilities is still very much bound up with educational opportunities; physical access; technology availability; employment opportunities.

A referral guide to library and information services for people with special needs is being compiled in Western Australia. I was told that this is required so that clients with special needs can be correctly referred to other organisations able to assist them with library resources and/or other services.

What Ross Barrett is doing at Darwin Public Library could well serve as a model for all public libraries in Australia. Very clearly he believes in the empowerment role of libraries and therefore in the responsibility of public libraries to meet the users' needs without trying to change generalised human behaviour.

Darwin Public Library is moving towards removing the barriers users encounter when seeking information. Specific actions include discouraging divisions between types of enquiries, beginning to push a cultural change amongst staff to view the library as an information and referral service, integrating community information with reference and circulation desk enquiries and beginning to redesign service points to reflect this, and developing an organisational structure which reflects this by recognising that clerical library assistants also have specialities and skills in their area of interest.

All libraries must recognise that librarianship's embrace of the ideology of information literacy means adopting a cause that is bigger than the field itself. That cause incorporates the support of information literacy in public libraries and schools, and requires all librarians to transcend their own rhetoric, to dispel ambiguities in their own jargon, to be sceptical of their own propaganda and to market only what they can deliver.

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WORKPLACE EDUCATION

Robert Bean
Manager, Workplace Education Service Adelaide College of TAFE

The presentation took the form of discussion around the key issues of workplace education. These discussion points were outlined in a series of transparencies reproduced below

In considering what the government is doing or saying about workforce education, training, information and development needs, it is obvious that profound industrial and economic changes are driving employers, unions and governments to address these needs on a number of fronts. The industrial and political context of workplace education is the mainstream.

The industrial and political context of workplace education includes

- Industry and economic restructuring
  Lowered tariffs; industry assistance plans; shift to service industries; skill formation
- Industrial relations reform
  Award restructuring; enterprise bargaining; employee involvement programs
- Work method changes
  Just in time; total quality control; job redesign; autonomous work groups
- Workplace legislation
  Occupational health, safety and welfare; equal employment; training guarantee levy
- Training developments
  Skills audits; recognition of prior learning; competency based training; industry training boards; workplace English language and literacy programs

All of these forces and developments are simultaneously highlighting and creating demand for education at the shopfloor level. Surveys conducted in 1989 confirmed the central place of literacy and communication skills for employment[1]

What makes a good employee?

100 employers and 52 unions were asked to rank seven characteristics needed by effective workers

Skills	Rank	
	Employers	Unions
Literacy skills	1	1
Sense of responsibility	2	3
Communication skills	3	2
Specific technical skills	4	4
Interpersonal skills	5	5
Mathematical skills	6	6
Maturity	7	7

Workers are also concerned about their abilities to take advantage of new training opportunities, and to retain jobs that are changing in response to the myriad influences that characterise the contemporary scene. One survey conducted in Adelaide by Bridgestone Australia Ltd in 1991 shows the extent of the demand for literacy, numeracy, English language and communication skills training among 900 shop floor employees in three divisions of the company.[2]

From this survey it was found that 190 (21 percent) had 'poor' skills in more than one of the identified areas; 270 (30 percent) had 'fair' skills in more than one of the areas. 360 of those surveyed (40 percent) expressed interest in training. Of these 76 percent were of nonEnglish speaking background.

Reasons for seeking training	
For their current jobs	27.5%
To prepare for future training	32.5%
For promotion	19.5%
Other/not stated reasons	20.5%

The building and furnishing industries are industries in which some skill areas rarely change. The trades in these industries include painters, cement masons, bricklayers, plumbers, electricians, boilermakers and elevator constructors. Enormous information and training demands are emerging with the introduction of technological change.

The new technology will affect many jobs. Consider the effect of

laser technology
fibre optics
solid state microprocessors
TIG welding
large scale panelisation
structural glazing
chemicals, epoxies and other new materials
automatic levelling machines
hydraulic scaffolding
total stationing units

All these changes are leading to the need for higher order literacy, numeracy and communication skills across the workforce.

In the 'information age', everyone is affected. In the workforce the need for information literacy and related training has never been greater.

Information needs include

- microeconomic reforms as they affect industries
- industrial reforms as they affect organisations, for example enterprise bargaining, industry and award restructuring
- management reforms as they affect work groups and individuals, for example total quality management, productivity improvement, flatter management structure, team building and employee involvement
- education and training requirements and opportunities, for example future skill and knowledge requirements, training options and modes

Training needs include

- literacy, numeracy and English language education
- generic skills training, for example learning to learn, information access and handling, occupational health and safety, problem solving and group dynamics
- specific technical and vocational skills training

What are the roles that libraries should play in supporting workplace education? At the 1991 Australian Library and Information Association TAFE conference I discussed the roles that TAFE Learning Resource Centres had to play in meeting the demands of working men and women and the English as a second language, literacy and communications teachers responsible for workplace education. This list has certainly not become obsolete in the intervening months and can probably be expanded.

Teacher requirements include providing access to

- professional journals
- teaching materials
- technical texts
- industry information
- human resource development information

Workplace student requirements include

- access to, assistance with and familiarisation to the library
- provision of literacy and language learning resources
- information skills programs
- provision of job and career specific information and materials
- long term and flexible loan arrangements
- distance learning programs
- learning technology assistance

Industry requirements include

- information on available services
- referral arrangements
- assistance in promoting language and literacy learning to workers
- access to technical and human resource development resources

What is the government doing to meet workplace training needs?

The earliest programs date from the 1970s and include Adult Migrant Education programs such as English in the workplace. Basic workplace education courses were provided through the Colleges of Advanced Education and TAFE through the 1980s. These programs are now offered by TAFE Colleges, private providers, universities and institutions such as the National Languages and Literacy Institute.

An increasing number of programs are now developing and a dramatic boost to funding has occurred over the last eighteen months.

- *Workplace English Language and Literacy programs* will receive seeding funding for new programs and initiatives in 1993 (approximately $9.6m) from the Departments of Employment, Education and Training (DEET) and Industrial Relations (DIR). Priority industries which have been targetted for 1993 include automotive, building and construction, food processing, metals, textiles, clothing and footwear, and transport

- $3.75m has been allocated over the next three years by DITAC for the *National Food Industry Language and Literacy Support project*
- DIR has funded *Best business practice programs*
- Funding for *National research and development programs* has included professional development packages for workplace educators, workplace literacy best practice research and the development of a national framework for adult language, literacy and numeracy programs

As an example of the range of services offered by workplace educators, the South Australian Department of Employment and TAFE Workplace Education Service provides

1 Training and communication surveys such as skills audits and communication training needs analyses

2 Language, literacy and communication skills training. The range of courses offered includes
    English as a Second Language courses
    Literacy and numeracy courses
    Individual learning contracts
    Technical and special purpose English programs
    Skills training support and bridging courses
    Communication skills workshops and courses

4 Other services include counselling and referral services, training program design assistance, management and supervisory training seminars, and publications advisory and editing services

It is clear that lifelong learning is a central element of this massive change within workplace and educational culture. Consultation between workplace educators, employers, unions and government agencies has raised issues such as

- Identification of the need and demand for workplace education through regional, industry and enterprise surveys and the development of priorities and strategic plans
- The need to link workplace language programs with skills training programs so that workplace trainers are skilled in both language and industry training and language and industry training is integrated
- Development of staff, curriculum and resources through the provision of specialised resources and workplace training for teachers and program coordinators
- Development of new strategies for workplace education delivery. This could be through the creation of integrated teaching teams (industry and education), the adoption of flexible learning approaches etc
- Improve organisational communications through the introduction of management and supervisory communication training, leading to the simplification of workplace documents and systems
- Institutional support for workplace education through establishing industry commitment to team continuity and funding and the adjustment of performance indicators to reflect the diversity of professional roles

Workplace education is the agenda for the future. It is also evident that in every facet of this emerging field, the concept and development of information literacy skills is critical.

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INDUSTRY AND BUSINESS

Marilyn Harlow

Manager, Research Small Business Corporation

An important aspect of the concept of information literacy in the industrial and business setting is the ease of access to business information. Business Resources in Local Libraries (BRILL) is a successful example of cooperation for this purpose between libraries and business. Established to develop ideas for promoting resources in public libraries to local business, the BRILL Working Party includes librarians from public libraries and the State Library of South Australia and the Research Manager of the government funded Small Business Corporation.

The group's first venture was a kit, sponsored by Telecom and distributed to all public libraries throughout South Australia. Workshops were held to help librarians make the best use of the kit's content. Considerable interest was created among local business people and an increase in use of these resources has taken place in public libraries.

It is important to remember that small business people are, above all, practical people looking to satisfy their immediate information needs. Not for them the long academically rigorous search through the literature. Their style is to search for materials that may be 80 percent accurate but spot on in terms of timeliness and relevance. The typical small business owner, as far as there is such a person, tends to have a technical and further education or trade qualification, rather than a more academic one. As a result, small business owners tend to look for information that directly relates to their industry or trade and is clearly presented. Many small business owners work long hours; 60-80 hours a week is common to operate the business and keep the records up to date.

This has implications for the library service, for example

1 the library needs to be accessible

2 it should
  - have easy parking
  - be open when businesses are closed in the evenings and on weekends
  - offer assistance to people who are unused to using catalogues and searching through the Dewey arranged shelves for information. The logic which puts the marketing, bookkeeping and law books on separate shelves and in separate aisles is only a time consuming frustration to the time pressed business person. The housing of periodicals, tapes and videos in separate areas and with different loan periods may also be confusing.

3 access can be made easier for them in a number of ways and clearly, while resources cannot be reorganised to suit the needs of one group of borrowers, access may be facilitated through

- a separate display area with reference materials such as business directories, tapes and videos
- explanatory posters and a handout on how to access the main collection
- adequate cross referencing in the catalogue to alert borrowers to all the resources and their locations
- holding the Australian Bureau of Statistics information about the local government area and local and community information directories
- ensuring that business people are aware of these resources as a fund of local knowledge

4 The major question of what materials to hold is a challenge to the local library. This offers an opportunity to work with local economic development officers and business groups to match the library's holdings with the specific needs of the local business community. Finding out if any particular industries predominate, and carrying a comprehensive range of trade magazines and overseas journals which would enable local business to keep abreast of overseas trends without paying the high cost of subscriptions is a valuable service.

The public library has a key role to play in fostering entrepreneurial activities and reducing failure through supplying information which may help practical planning and development of business ideas.

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THE PROBLEM OF CURRENCY: INFORMATION LITERACY IN THE CONTEXT OF AUSTRALIA AS A LEARNING SOCIETY

Philip C Candy
Associate Professor and Director, Academic Staff Development Unit Queensland University of Technology

In recent years, the term information literacy has come to stand for a cluster of abilities that are required to cope with, and to take advantage of, the unprecedented amounts of information which surround — and at times overwhelm — us in our daily life and work. In Australia, as in other advanced industrialised countries, the attainment of information literacy has become a major educational goal. However information literacy is not simply a response to the demands of the information society, but an important set of intellectual accomplishments that can aid in the realisation of the 'learning society'. This is an ideal whereby all members of society would have lifelong learning opportunities which are fulfilled through access to a limitless variety of agencies and experiences in addition to those provided by the formal education system.

Using the theme of 'currency' as an organising principle, this paper explores six aspects of information literacy in the Australian context. It then passes to a consideration of the notion of Australia as a learning society, and presents a three part model of what is required — from the perspective of an individual — for the learning society to become a reality. Finally, the six aspects of information literacy are superimposed onto the three part model, and it is argued that individual attainment of information literacy — so necessary in the context of the information society — is also necessary (but not in itself sufficient) for people to be able to participate fully and actively in the emerging learning society.

Introduction

On 29 August 1834, exactly two weeks after King William IV had assented to the measure that declared South Australia a British Province, and a full two years before the colony was actually proclaimed, a few 'gentlemen intending to emigrate' met in London to form The South Australian Literary Association. This Association had, as its primary aim, 'the cultivation and diffusion of useful knowledge throughout the colony,' which it was proposed would be achieved through five means

1 Subscriptions by the members
2 Donations of money, books, specimens, models, and apparatus
3 A library of reference and circulation
4 Lectures on the most interesting and important subjects in literature and science; as agriculture, history, mathematics, political economy, and natural and moral philosophy
5 Periodical meetings for conversation[1]

Although the foundation of an institution such as this, with the express intention of subsequently transplanting it to the new Colony of South Australia, was unique in Australia's history, the foundation of associations with very similar aims was in fact part of a pervasive self improvement movement that spread across the English speaking world around this time. The nineteenth century British, with their unshakeable faith in the twin principles of 'progress' and the 'perfectibility of man' (though not yet of woman!) were to establish mechanics' institutes, lyceums, schools of arts, scientific institutes, and literary associations in the most far flung parts of their domain. By the time the South Australian association was formed, there was already the Van Dieman's Land Mechanics' Institute in Hobart (founded in 1827) and the Sydney Mechanics' School of Arts (founded in 1833), and eventually such institutions were established throughout the length and breadth of Australia.

Seven of the original ten members of the South Australian Scientific and Literary Association (the name was changed in November 1834) not only went ahead and actually emigrated, but were to become significant figures in the colonisation of South Australia: John Brown; Thomas Gilbert; Osmond Gilles; Robert Gouger; Richard Davies Hanson; George S Kingston; and Edward Wright. Although the membership was not limited to gentlemen (ladies were able to participate as 'guests'), the imposition of a two guinea annual subscription effectively precluded participation by many members of the 'labouring classes' for whom the Association was also intended. In retrospect, this may be regarded as a harbinger of subsequent practice whereby, ironically, access is effectively denied to those very groups for whom an information service is intended.

On 5 September 1834, Richard Hanson, later to become the second Chief Justice of the Colony and first Chancellor of the University of Adelaide but at that time barely thirty years old, gave an inaugural address to an audience of thirty five 'ladies and gentlemen', in which he offered the opinion that the members 'were engaged in a unique experiment, and that never before had such enlightened planning for the cultivation and diffusion of knowledge in a new country been attempted. The nearest parallel to it, he said, was the example of the New England colonists, who prior to departing from England organised and made provision for continuing the religious worship and instruction which had been such a rock to them at home'.[2] Over the ensuing months, forty members were enrolled and nineteen lectures and conversaziones were held. The members, Bridge remarks, 'were relentlessly addressed on Australian geology, aborigines, phrenology, the astronomy of the southern hemisphere, the natural history of South Australia, and various practical schemes for the colony from drainage to a volunteer police force'.[3]

The Association did not survive the removal to its new home in South Australia without mishap. The tin trunk containing its library was dropped into the Port River on disembarkation from the *Tam O'Shanter* and when recovered lay unopened for two years, and the rigours of nation building deflected the members from their lofty ideals for a time. It was several years before the revived Association even came close to fulfilling its promise of providing information to all colonists in South Australia. Nonetheless as in so many other aspects of South Australia's early history, the formation of a Scientific and Literary Association even before the colonists embarked for their distant new home, indicated an enlightened concern that the benefits of learning should be available to all classes of citizens.

I have begun with this brief historical introduction for one major reason. Although the rhetoric of the Association's founders may sound quaint and anachronistic, and their advocacy of the God given nature of the class system seems ideologically suspect to modern readers, they were in fact idealists who recognised that access to information was fundamental to a full and active participation in the intellectual, social, political, cultural and economic life of their embryonic community.

This is precisely my starting point as well. Information literacy is not an end in itself, but rather a means to an end. Its value lies in the fact that it bestows on people, not simply the ability 'to recognise when information is needed and ... to locate, evaluate, and use effectively the needed information'[4], but to do so within a constantly changing social and cultural context and over a lifetime. Moreover, information literacy allows people to contribute to the intellectual and cultural life of the community in a range of roles, 'as creators, audiences, participants and consumers'.[5]

Information literacy: Why all the fuss?

It seems that no sooner do we come to grips with one set of social circumstances than another one is upon us. Perhaps this is what sociologists and critical theorists mean when they state that we live in a post modern world; old certainties have vanished or are under threat and everything, it would appear, is 'up for grabs'. I suspect that I am not alone when I say that I had just begun to understand the implications of universal literacy — the right of everyone everywhere to be able to read and write at least at some minimal level — when I was bombarded by other concepts; functional literacy, visual literacy, media literacy, computer literacy, political literacy, and now information literacy. Is this simply lexical inflation, or do all these terms betoken something new and important?

Central to any understanding of the concept of information literacy are the terms themselves; information and literacy.

I am probably as well read as the mythical 'average' person about concepts such as 'futures', the 'learning society', and 'information explosion'. But I had not realised, until I came to prepare this paper, the extent to which 'information' rules our lives and affects our cultural, political and economic systems. The word itself is used so widely in everyday discourse that we commonly fail to define what it means, and consequently fail to recognise how pervasive information is to our way of life. The House of Representatives Standing Committee for Long Term Strategies, in its report *Australia as an information society: grasping new paradigms* [6], defines information as 'data processed, organised or classified into categories to secure a useful purpose'. This, however does little to convey a sense of what sorts of information underpin our day to day lives.

I had not realised for instance, that 78 percent of the Australian workforce in the 1990s work in the 'tertiary' or services sector of the economy, with a very large proportion (41.5 percent) working essentially with information.[7] I had not realised that so many occupations are concerned wholly or largely with collecting, interpreting, transmitting, disseminating, conceptualising, collating, recording, broadcasting, providing, publishing or negotiating information.[8] I had not internalised the fact that (depending on the definition used) Australia imports annually between $4 and $8 billion more information technology than it exports[9], or that at least ten ministries at the federal level have significant policy, regulatory or advisory responsibility with respect to information.[10] In short, I had not realised that the 'information society' is well and truly upon us, and that it had brought with it the need for considerable adjustments and the development of competencies to deal with the flood of information.

And what about literacy? What might have sufficed as a definition of literacy 150 years ago or even fifteen years ago is quite inadequate to the information demands (and opportunities) that confront us now. As Breivik and Gee put it; 'Currently most people would define as literate a person who can read and write. However, historical examination of the concept reveals that a useful definition depends on the information needs of society'. From what I have just said, it is evident that the information needs of Australian society — in both their extent and their complexity — call for a much more sophisticated notion of 'literacy' than has prevailed to date. In fact

> The evolving definition of literacy has developed along three dimensions that mirror the expanding information needs of society. Qualitative standards have increased to encompass higher order cognitive processes. The social and individual purposes that literacy serves have broadened. The scope of literacy has also widened from the religious and scholarly élite to include the whole population.[11]

In short, information literacy involves higher standards of attainment, across a wider range of skills and accomplishments, by a more diverse cross section of the population. As I will discuss later, this poses a significant challenge for everyone from parents, educators, librarians and other information professionals, to policy makers and in fact all those engaged in collecting, processing, manipulating and transforming information and/or knowledge to assist information users as far as possible to recognise their information needs, to become aware of what is available, and to develop the skills needed to access and use information.

However, the story does not end there, 'because literacy (like autonomy) is not a single once and for all accomplishment, but one where varying levels of attainment are possible in different subject areas'.[12] In other words, 'there now seems to be a consensus that literacy is highly context specific and context dependent'.[13] Furthermore, because of the rapid and pervasive escalation in the amount and complexity of information available, a person can never be said to be fully 'literate' in any final sense. Keeping up — or remaining current — is now a lifelong pursuit, and accordingly, in order to discuss the many facets of information literacy, I have chosen to use the recurring motif of 'currency'.

Currency I: The information explosion

The first sense in which I will use the word 'currency' is that of being up to date or current. The vast increase in the amount of information which confronts us today has been labelled the information explosion and its pernicious effects have been widely discussed in both the scholarly and the popular press. Accordingly to some observers even up to the early seventeenth century, 'it was theoretically possible to have all of the world's recorded knowledge stored in one room'.[14] Today, however, we live in a 'rapidly changing, complex, information rich environment'[15] where information in even narrow and esoteric specialisms is growing at such an exponential rate that computerised databases — much less human readers — are unable to keep up with the flow of new material.[16]

In virtually any profession so much is published annually that a full time researcher, never mind a practitioner, could only hope to keep up with a tiny fraction of what is published each day. Many professions, recognising both the need for and difficulty of keeping up to date, have endorsed programs of continuing professional education.[17] Indeed, in some cases, the press of new research findings is so acute, and the need to keep up to date so vital, that such continuing education is a compulsory precondition for continuing registration. However whether mandatory or voluntary, these programs have severe limitations in their ability to deal with the rapidly changing face of theory and practice in various occupations. As a consequence schools and universities fail in their duty if they do not equip students with the ability and the predisposition to carry on their own professional development after graduation.

This raises an important point about formal education and its relationship with the workplace. When students attend school, college or university, there is a reasonable expectation that (a) they will be introduced to the best current knowledge and practice in the subject area and (b) they will learn how to access and use information sources that are required for academic purposes eg library collections; abstracting services; online and CDRom data retrieval facilities. But they tend to master these accomplishments in the **relatively** stable, structured, and predictable environment of the educational institution, for specific purposes. In the real world of practice, of course, the need for learning crops up in much more random, chaotic, urgent and diverse patterns, and graduates should be able to recognise and deal with such information needs without the props afforded by study guides, project briefs or exam questions.[18]

There is a considerable literature about preparing students with the information retrieval skills necessary to maintain currency during their studies. But as Breivik observes, 'it is important not to confuse the development of information literacy with library or bibliographic instruction. While campuses with active library instruction programs may have an advantage in incorporating information literacy learning experiences into coursework, there are significant differences between these two areas'.[19] For educators, there is a distinct need to connect real life resources with learning needs in the institution, perhaps through resource based teaching.[20]

In the general domain citizens are bombarded with newspapers, magazines, radio and television broadcasts, films and videos, not to mention various online and subscription information services such as Prestel, teletext and computer bulletin boards, and accordingly they must manage as best they can to keep up with the overwhelming volume of information.

As Brookfield so aptly observes of one medium 'television is not a river of messages, symbols and images into which we occasionally dip, but rather an ocean in which we perpetually swim'.[21] Because of this pervasive influence — and television is only one of the many information sources impacting on us each day — there is a role for increasing people's astuteness and discrimination with respect to what they watch, listen to or read. This discernment is one facet of the broad construct of information literacy. However, if there is a profound problem posed by the sheer volume of new information; this is compounded by the very valuable quality of information in many fields. Accordingly, there is a need for information literacy also to incorporate some notion of critical evaluation. I will return to this issue of distinguishing good from bad information later in this paper.

Currency II: Information technology

It is not only the substance of what is to be learned that is subject to continuing change and obsolescence. The means by which people must keep abreast — whether professionally or in other aspects of their lives — are likewise constantly evolving. At one time, the ability to read and having access to a library (or at least a newspaper reading room) were all that was required to keep abreast of current developments. Today, however, information is stored and conveyed through a bewildering variety of media. Newspapers, magazines, journals, books, radio and television are all accepted ways of disseminating information, but so too are the telephone (including various forms of voice response technology), audio and videotapes, computers, personal pagers and facsimile machines. As more and more information is stored and made available in nonprint form, people need to be technologically literate to access and use it.

In the formal education system, particularly in higher education, it is becoming increasingly common to find alternate delivery modes which require a high degree of technological sophistication on the part of the learner. Many students are quite nonchalant about using educational television, computer based education and computer conferencing, audio and videotape recorders and telephone conferencing, interactive video, and simulators of various types, and they may be expected to carry this familiarity over into their workplace and indeed for the rest of their lives. But university graduates constitute only a tiny proportion of the Australian population, and access to and understanding of these technologies is not universal. People in remote locations, the unemployed and those in lower socioeconomic groups, those of advanced years, those with lower standards of formal education, and those with various forms of disability may for a variety of reasons lack access to the technologies which would in turn allow them to obtain and use information available to the 'information rich'.

Take for example, a hypothetical situation of an elderly pensioner, living alone in a rural community in which she has lived all her adult life. Her children have long since left home and moved, in some cases interstate. Even such a basic technology as the telephone, which most people living in cities would take for granted, might be unavailable to her, if it were not for deliberate policy (a) to provide cross subsidisation so that the same phone services were available in the bush as in urban areas and (b) to allow reduced rental and subsidised calls for the elderly or disadvantaged. In a recent paper on *Social equity in communications policy*, Balnaves and Caputi explore the issue of equitable access to relevant communications technology.

> Telecommunications and computers are irresistible intruders into the daily lives of people and businesses. They are irresistible not because there is some mystical role that technology plays in shaping our lives, but more importantly because they advantage us in many useful ways. The issue is, to what extent is that advantage equally distributed and how do we know when it is and when it is not?[22]

Clearly this is an important question, not just for the providers of telecommunication services, who under the Australian Telecommunications Corporation Act 1989 have a formal community service obligation, but even more so to members of the community who may suffer disadvantage due to unequal access to vital communications technology.

Currency III: The information economy

Australia is one of a number of countries including Japan, the United States, Great Britain, Canada, France, Germany, Italy and Sweden, in which a high and increasing proportion of the workforce is employed in collecting, processing, manipulating and transforming information and/or knowledge. One of the dramatic changes that has affected these countries is the emergence of what is called an information economy.[23] As part of this process, there has been a commoditization of information, though in this case the commodity is invisible and intangible, and can be transmitted electronically — even across international borders. An important corollary of treating information as a commodity is that those people who have greater access to it become 'information rich', while those who do not are classed as 'information poor'.

In an article on the information rich and information poor, Wilson writes 'however you analyse society on a macro or a micro scale, existing differences of wealth, education and environment are being accentuated by our relative ability to use IT information technology'.[24] Wilson also emphasises that this distinction between information rich and information poor applies equally to individuals, to companies and corporations, and even to entire nations, but of course it is possible to have information rich companies within information poor countries, and vice versa, just as it is possible to have individuals whose access to information is greater or less within a country that is classified one way or the other.

A point that Wilson makes, almost in passing, has particular significance in the context of Australia's international competitiveness: 'Within business and industry, large and medium sized firms have always paid more attention to information as a resource, and this divide from the small business is widening...'.[25] Given that a very large proportion of Australian enterprises are small, this may indicate a general level of 'information poverty' in Australian business that needs to be addressed by a combination of widespread public education, cooperation among business enterprises themselves, and government action.

A second major corollary of treating information as a commodity is that it has a value, like money. And like money, its value is largely specific to a particular time and place. If you take cash from one country to another, it ceases to have any value in the sense of widespread acceptance and purchasing power. Similarly the information needed by a wheat farmer in Western Australia is probably useless to a motel operator in Cairns. It is vital to recognise that information — and hence information literacy — *is highly context specific* and that the search for universal skills of information literacy will be elusive and fruitless.

Another parallel between information and money is that the value of each can be debased or devalued. Information can be debased through deliberate or unintentional disinformation (misleading, incomplete or inaccurate information) or devalued, either through being out of date or through its excessive abundance. Years ago, information retained its validity for relatively long periods of time. Today, information goes 'stale' remarkably quickly; in the case of financial information, this can be a matter of minutes or even seconds. For this reason, information and telecommunications are inextricably intertwined, and the future of one is interdependent with the other.[26]

Currency IV: The costs of information

A fourth meaning for the word 'currency' in the context of information is the currency which has to be expended in obtaining, verifying, storing or utilising information. Notwithstanding legislation that guarantees freedom of information, information is not free, at least not in the economic sense.

I have already alluded to various forms of disadvantage that can effectively deny some sections of the community access to information, and at the heart of many of them is the fact that information costs money. Wilson points out that 'within each Western society the "haves" and "have nots" in wealth terms, are being reflected in the capacity to participate in the IT revolution'.[27] Since much information is developed for commercial purposes, and its storage and dissemination both cost money, and are themselves sources of income, the fact that information users have to pay is not really surprising. Even government information is now commonly released on a user pays principle, so that although citizens may have a right of access, they must be prepared to pay search, copying and other fees. In other cases, the information itself may be free, but the user must have access to certain technology — such as a telephone or computer terminal — to gain access to it. In Australia, for instance, a great deal of information is available through online databases, but a potential user would need a computer, a modem, a telephone line, and quite possibly some specialist software, to gain access to it.

This aspect of currency even afflicts the most readily accessible sources of information, namely libraries. Wilson mentions that 'research libraries in universities and elsewhere are facing an increasing problem due to the growth in titles and in prices of scientific and technical serial literature, which is threatening their ability to buy adequately for... researchers.[28] In Australia, the problem for libraries is particularly acute; indeed it has always been so. Because of our relatively small domestic market, we are forced to rely substantially on books, magazines, journals and databases from overseas. And because of our distance from other major English speaking countries, there is both a delay and an added cost in bringing materials here. Finally, of course, we are subject to the vagaries of exchange rates, which frequently work to our disadvantage, making library materials disproportionately expensive to Australian users. All these facts have an influence on the access to and attitudes toward information within Australia.

Currency V: The value of information

On 19 May 1992, *The Bulletin* carried a story about counterfeit currency in Australia, and the work of the Australian Federal Police Currency Squad. The article dealt with the uttering of false foreign and Australian bank notes, many of which were of sufficient quality to avoid detection by traders or even by bank tellers who routinely handle large numbers of genuine notes. There is an analogy here for information literacy; not all information is 'genuine' in the sense of standing up to critical scrutiny, and it would seem to be important for the concept of information literacy to incorporate an element of critical thought rather than unquestioning acceptance. As previously mentioned, it is not simply the volume of information which challenges those concerned with information literacy, but its variable quality

Perhaps even more worrying, the article also dealt with examples where people had been taken in by much less convincing fakes, including promotional material printed to resemble money. According to the report

> What makes passing counterfeit money easier is the gullibility of many Australians. This goes far beyond the simple checks of whether, in the case of $50 and $100 notes, there are watermarks and a metallic thread.
>
> Phoney bills similar to a $100 one but clearly marked $110 have been accepted and even had change given for the full amount, as have notes similar to a $50 bill but marked $55...
>
> Some people were even duped by blue $10 look alikes with the amount changed to $12 and a photograph of comedian Paul Hogan substituted for the likeness of colonial architect Francis Greenway... Another fake, issued as part of a political campaign by the Builders' Labourers' Federation but successfully passed, was based on the old green $2 note. It was clearly marked $3; included a likeness of former Prime Minister Malcolm Fraser, and bore the slogan: 'where have all the dollars gone? Gone to profiteers every one'.

The fact that many people are so inattentive or uncritical or even ignorant that they will accept, and give value for, such worthless notes would be laughable; if it were not so serious. Much of the literature on information literacy seems to presuppose at least minimal levels of discrimination, observation and common sense. Much of it, indeed, is much loftier in its focus and seems impossibly ambitious when viewed against the backdrop of such inadequate literacy skills. A recent paper by Long claimed that 'one in seven Australian workers is functionally illiterate: that is, he or she cannot read, write and/or enumerate well enough to cope efficiently with his other daily affairs.' In itself, Long writes, 'and disregarding the many hundreds of thousands of illiterates not in the workforce, this figure should cause concern.[29] This is a gross understatement; it suddenly seems a daunting and somewhat naive prospect to be endorsing ever higher standards of critical thinking and informational sophistication, when base level skills are evidently so underdeveloped.

Currency VI: Information and the 'Cultural Cringe'

The sixth and final usage of the word currency in this context is a uniquely Australian meaning which carries us back almost to the beginnings of European settlement in this country. In the first decades of the nineteenth century the word 'currency' came to distinguish the native born Australians from the 'sterling', or those born in Britain. According to Peter Cunningham in his book *Two Years in New South Wales,* the term was coined by a facetious paymaster of the 73rd Regiment quartered in Sydney: 'the pound currency at that time being inferior to the pound sterling'.[30]

With the twist of understatement and irony that have since become hallmarks of the Australian sense of humour, this pejorative usage was neutralised and eventually gave way to an inverted form of pride

> The two terms (Currency Lass and Currency Lad) became quite popular in the 1820s. 'The Currency Lads' was a popular toast, *The Currency Lass* a favourite tune, and there were frequent references to the term in printed birth notices. In 1826, a vessel named *Currency Lass* was launched on the Hawkesbury River; in 1832 *The Currency Lad* coach ran from Sydney to Windsor, and in the same period, there were cricket clubs in Sydney known respectively as 'the Currency Lads' and 'the Sterlings'.[31]

Although the term currency in this sense was incorporated into Australian idiom, and even robbed of some of its venom thereby, the sense of inferiority has lingered on, now recognised under the term 'cultural cringe'. The widespread — if tacit — belief that something or somebody from abroad is superior to the local equivalent has died hard and it is only in comparatively recent times that 'Australian made' has become a source of widespread acceptance and even acclaim.

In terms of information literacy this attitude has often led to a perverse preference for both data and technology derived from overseas. Admittedly there has in recent years been a significant increase in the public profile and acceptability of both home grown technology and Australian ideas, but many people have continued to exalt imported over locally developed concepts and applications, with a consequent dilution of our economic, social and cultural integrity in favour of an eclectic and often ill assorted pastiche of exotic rather than indigenous policies and practices.

Information literacy as a bridge to the learning society

It is evident that information literacy, as a response to the information society, is a complex and multifaceted notion. One which is powerfully influenced by international trends including the proliferation of information and the emergence of a worldwide information economy. At the same time it is affected by the characteristics and cultural history of each nation and consequently it must be understood to mean something slightly different in each country; indeed there is no such thing as a universal standard of information literacy.

In Australia, there has recently been a major enquiry into information policy at a national level, which has given rise to two published reports *Australia as an information society: grasping new paradigms*[32] and *Australia as an information society: the role of libraries/information networks*.[33] Together these reports provide some overview of the implications of the information society for educational providers, libraries and other data repositories, telecommunications suppliers and authorities, government departments and instrumentalities, policy makers, lobby groups, members of the public; in fact just about every sector of the community. As important as these reports and their recommendations are, they do not seem to promote in any systematic way, the enlightened ideal of Australia as a learning society; a place where learning is valued as a national priority, and where it is actively facilitated both inside and outside the workplace.[34,35] Yet, the very same social, cultural, technological and economic changes which have converged to create an information society to which people have had to adjust, have also conspired to bring about greater opportunities than ever before for people to engage in learning of their own choosing. If the information society is a black cloud, its silver lining may turn out to be the learning society.

The learning society: A conceptual framework

For years — perhaps for decades — it has been increasingly obvious that one could not hope to get through life with the full tank of 'educational petrol' obtained in a relatively short burst of formal instruction at the beginning. If it was ever appropriate, and many would argue that there has always been a need for some level of continuing learning throughout life, it is evident that now, in the last years of the twentieth century, no education that starts at six and ends at 16, or even at 18 or 21, can hope to equip people for all the changes they are likely to encounter in their lifetime. Not only is people's life expectancy now greater than ever before, but most people can expect to undergo several major career changes during their working life. Fifty years ago, A N Whitehead wrote

> ... in the past, the span of important change was considerably longer than that of a single human life. Thus mankind was trained to adapt itself to fixed conditions.
>
> Today, this time span is considerably shorter than that of human life and accordingly our training must prepare individuals to face a novelty of conditions.[36]

In the years since Whitehead wrote these words, the pace of change has if anything quickened and today we are confronted with the need for continuing adaptation and change throughout our lifetime. To describe this phenomenon, the term lifelong education has been coined. Although Yeaxlee actually used the term as long ago as 1929, it has really only entered the vocabulary of most educators in the past twenty five years, largely as a result of Unesco's pioneering work in the field.[37] In fact, in 1972, lifelong education was proposed by the International Commission on the Development of Education as 'the master concept for educational policies in the years to come for both developed and developing countries'.[38]

Briefly stated, lifelong education involves 'the conviction that all individuals ought to have organised and systematic opportunities for instruction, study and learning at any time throughout their lives'[39], and accordingly that artificial barriers to and between levels of education should, as far as possible, be eradicated. This is referred to as *vertical integration*. Despite the compelling logic of lifelong education as a self evident necessity, educational systems have been remarkably resistant to change and it is only in the past couple of years that credit transfer arrangements and the recognition of prior learning have made the progress of individuals through the educational system a little easier or smoother than it was decades ago.

A second major change, resulting as much from technological progress and economic necessity as from ideological conviction about educational opportunities, is the realisation that much perhaps most significant learning actually occurs outside the educational system *per se*. For those who work in schools, colleges and universities and even libraries, who have assiduously carved out a claim to being the major providers of systematic learning opportunities, this can be a somewhat disturbing realisation. But the fact is that quantitatively and qualitatively, people learn most of what they need to function in society outside of formal education; at home, in the community, through clubs and societies, from church, at work, through radio, television, newspapers. Access to these diverse learning opportunities is referred to as *horizontal integration*, or as 'lifewide education'.[40] Taken together, these two great movements envisage the emergence of a learning society — a situation of virtually limitless and seamless learning opportunities, where people naturally and unselfconsciously participate in learning throughout their lifespan, and where 'any social system (family, neighbourhood, organisation, agency, community, state, nation or world) can be conceptualised as a system of learning resources'.[41]

At first sight, the vision of an educational system that embraces everything and extends throughout life might seem Orwellian, especially when — as often happens — it is presented in the context of an economic rationalism that only values learning which has utilitarian goals. But what rescues the prospect of a learning society from the dual stigmas of totalitarianism and instrumentalism is the absolute freedom of choice of the learner; the deliberate and conscious attempt to recognise and honour the sovereignty of the learner and to equip each person with the skills of self directed inquiry so that they can choose their own pathways through the myriad learning opportunities they confront. And one of the key planks in the platform of self directed inquiry is information literacy.

From the information society towards the learning society

There is plenty of evidence to suggest that the information society — a situation in which information and access to it dominates our lives — is well and truly upon us. Whether we like it or not, the need to be able to locate, retrieve, evaluate and use information is a lifeskill of fundamental and growing importance. Conversely, the learning society — a situation in which people are empowered and enabled to learn what, where, when and how they like, throughout their lifespan — is for the most part an unrealised dream. The key difference, of course, is that the information society has evolved more or less willy nilly without conscious planning or coordination; whereas the learning society, if it is to eventuate, will necessitate both political will and the expenditure of great amounts of time, money and expertise. As I have already argued, the phenomenon of information literacy may provide a link between these two great models; 'Information literacy requires the ability to manage complex masses of information generated by computers and mass media, and (at the same time) to learn throughout life as technical and social changes demand new skills and knowledge'.[42]

I would like to offer a model of how the learning society might be realised before drawing together the threads and considering the place of information literacy within this world of learning. If one considers the question of the learning society from the point of view of the individual learner, there seem to be three main domains on which to concentrate: the learner's competence; his or her 'rights' (in both a philosophical and a legal sense); and the resources to which he or she has access.

Competence

Even if the definition of learning is restricted to that which takes place in formal educational and training settings, the list of competencies required to perform well is formidable. Studies of the skills invoked in learning in school, college or university cover an enormously broad range from listening, note taking, basic literacy and numeracy and information location and retrieval, to many higher order capabilities including question asking behaviour, critical thinking, goal setting, comprehension monitoring and self evaluation. Once the boundaries of learning expand to embrace the sort of 'lifewide learning' discussed earlier, the competencies called for likewise increase to include greater degrees of self determination, personal organisation, reflective self awareness, independence tempered with interpersonal and social skills, creativity, selfconfidence, perseverance, and metacognitive awareness. In my book *Self direction for lifelong learning*[43], I actually list over 100 attributes, characteristics and qualities of effective self directed learners as disclosed in the literature. However this whole approach to competency profiling must be treated with great circumspection as it fails to account for the specific patterns of skills that are relevant in learning different subject areas (such as chess and Chinese calligraphy), or even learning about the same domain (say law, or nursing) in different contexts.

A recent study of the transition from the university to the workplace as learning environments, illustrates that many of the learning skills called for in the university are significantly different from those required to continue learning after graduation.[44] At one level, this acts as a challenge to the ingenuity of educational providers which set out to develop these skills need to ensure that both their curricula and their teaching and learning processes are constituted in such a way that these capabilities are deliberately enhanced. Perhaps more importantly, it emphasises that the task of developing these competencies is not the preserve of any one sector of the educational spectrum, but of them all; a truly lifelong endeavour in which primary, secondary, adult and higher education are all united.[45]

Rights

In the context of the learning society learners' rights are really of two kinds. There is an inalienable right to learn throughout life which is part and parcel of our culture, and this in turn is taken to be part of a larger ideology in which people have a right to know about and to influence those facets of society which have an impact on their lives.

Australians have the right to expect access to information that enables them to fulfil their role as consumers, voters, workers, parents and citizens. There is, in our culture, the reasonable expectation that people will be able to access information when and where it is needed and that they will not be inconvenienced or discriminated against on grounds of gender, race, nationality, education, religion, geographic location, employment.

The second domain of rights consists of legislative or legally defined rights. Under a range of acts, regulations and by laws, members of the public now have access to large amounts of information they were once denied. Much of this concerns databases on themselves (government records, banking and credit information, employment records etc), but much of it, such as the Freedom of Information provisions, places at their disposal huge amounts of previously classified material about the operation of government itself. There is, of course, a countervailing set of considerations to guarantee the privacy of others and to safeguard both commercial interests and the national security, but in principle, citizens in Australia now have access to more information than most of them could ever reasonably use. In our society people also have the right to make use of certain services such as education, libraries, government departments.

Despite the range of rights that Australians enjoy, many people are unaware of their entitlements or, if aware of them, lack the confidence to use them appropriately. Information literacy entails both of these dimensions; knowledge and confidence. It is a significant educational task — in the sense of public education and information dissemination — to advise people of their rights. This task is made more daunting by the fact that many people live in isolated communities or for other reasons may lack access to channels of communication others take for granted eg television, telephone, access to a public library or as they are called in Britain, a Citizen's Advice Bureau. Even more importantly, they might lack the basic literacy skills in English to understand the information that is directed at them. In such cases, there is a prior educational task, especially in a multicultural country such as Australia, which is to enhance the basic literacy skills of people living here as a precursor to more advanced forms of educational program.

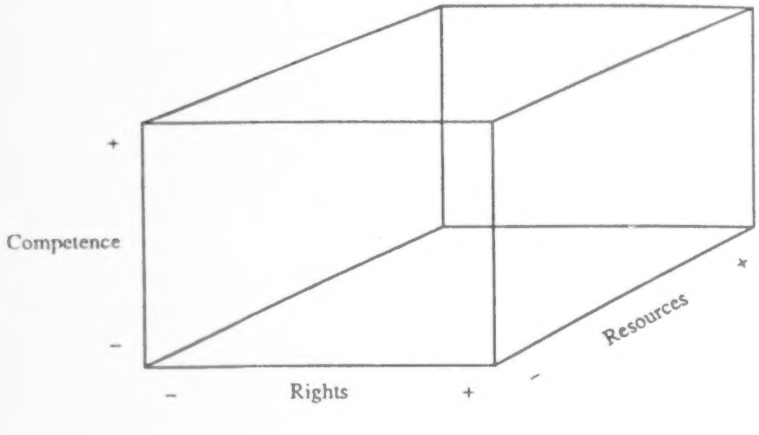
An even more difficult task than apprising people of their rights is that of equipping them with the confidence to exercise their rights to the full. Central to this willingness to take advantage of what has been provided is the self confidence and personal assurance that comes from having a fully developed and robust self concept, or as it is described by some, a 'sense of personal control'[46] of 'self efficacy'[47], or of 'personal agency'.[48] The development of people who have appropriate respect for their own abilities and sufficient confidence to exert 'captaincy of self'[49], is arguably the greatest challenge confronting our education system and our society.

Resources

It would be possible for a person to have the capabilities to learn in a variety of contexts, and even to have a full knowledge of his or her rights, and yet still be disenfranchised from the learning society. To participate fully and actively in learning opportunities throughout life, the information literate person needs to know what resources are available in the community and both how to get access to them and how to use them. At one level, this includes personal resources such as radio, television, personal computers. As previously mentioned, many of these resources are in turn dependent on the individual's financial situation, and this emphasises that information literacy is not in and of itself sufficient to ensure the ability to participate in the learning society. At another level, the whole question of resources is out of the learner's hands, being instead dependent on information providers, telecommunications corporations and authorities, government departments and agencies, companies and private institutions, and various community and civic groups. In short, the provision of resources for learning, including information and the means of access to that information, is a matter of policy and administration and, to that extent, has economic, social and political dimensions. It is in this domain, perhaps more than any other, that it is apparent that realising the vision of the learning society necessitates a conscious act of commitment on the part of those bodies in society which produce, manipulate, store, disseminate, transform, manage, or control access to information in all its many forms, and accordingly that — however important — information literacy is only one of requisites for a learning society.

Competence, rights and resources

These three domains or components of the learning society can be portrayed diagrammatically in the form of a cube, with one axis labelled competence, one labelled rights, and one called resources. If each of these axes represents a scale extending from little or none of the attribute to a great deal, it would be possible — at least conceptually — to place any person, or any group of people, somewhere along each of the three axes, and hence to indicate their unique position within the three dimensional space.



The three domains of the learning society

If considered appropriate to the individual or group concerned, the model implies that steps might need to be taken, by the individual or by others such as educators, providers or purveyors of information, or regulatory bodies and agencies, either to increase the amount of each attribute at the disposal of the learner(s), or to reduce or diminish barriers or blocks to their doing so for themselves.

Information literacy and the realisation of the learning society

In this final section of the paper, I will return to some of the points made earlier with respect to the multidimensional nature of information literacy, and will discuss their relevance to the attainment or realisation of a learning society. It will be argued that each of the six facets of information literacy discussed earlier under the general heading of currency can be superimposed onto one or other of the three domains of competence, rights, and resources, and accordingly that information literacy intersects with the notion of the learning society in various ways and at various levels.

Turning to the first of the six meanings of currency that I introduced and discussed earlier, it is apparent that currency in the sense of recent and up to date materials relates to the domain of resources, the information literate person knows what resources are available in the area of his or her interests, or at least has an idea about how to find out, and has access to those resources. While access is partly an individual matter, it is also partly a matter of social policy and political will.

The second meaning of currency, namely the skills of keeping up to date, relates to the domain of competence. The information literate person recognises that information exists in many forms and that it must be accessed using technology that is appropriate to the form. It is little good realising that information abounds, and that it is constantly increasing, if at the same time the individual does not have the skills and the predisposition to keep abreast of *how to access* that expanding body of material. Here again information literacy is not enough in itself to guarantee a learning society; it must be seen in the context of the many other competencies that I enumerated and discussed as being vital to a full and active participation in the array of learning opportunities available.

The third meaning of currency was the recognition that information itself has a certain value, that those who have access to comprehensive, accurate, timely, relevant information (the 'information rich') enjoy benefits that may well be denied to those who lack such access (the 'information poor') and that this distinction applies to individuals, to groups, to corporations, and even to whole countries. In the context of the learning society this aspect of information literacy relates to the rights that people enjoy, both philosophically and legally, to obtain and use information which directly affects them and their quality of life. One need look no further than the effects of repressive regimes on the availability, or rather unavailability, of information to realise that information is the key to power in most societies.

The fourth meaning of currency that I discussed was the cost of information, either in its own right, or in respect of the technologies and mechanisms as required to gain access to it. This clearly fits under the heading of resources and emphasises that both information literacy and the notion of the learning society have important dimensions of social policy attached to them. Information is not 'free', at least in the economic sense, and if we want to endorse the notion of a society in which people can learn as and where they want, a society where lifelong and lifewide learning are realities, then the resources for that learning must be brought within everyone's reach. Failing this, the learning society would simply replicate, or worse still exacerbate, existing social inequalities reflecting differential access to economic and cultural resources.

The fifth sense in which I used the word currency was to refer to counterfeit or worthless currency and I argued that this applied to information literacy in two senses. The first is that information can be 'fake', ie incomplete, inaccurate, out of date, misleading or otherwise deficient, and that the information literate person knows enough to be able to distinguish such faulty information from the real thing. This 'critical spirit' is a major component of the competencies required to function effectively in the learning society. I also made the point that information literacy, like other forms of literacy, has a cumulative aspect to it, and that it is naive, and probably even counterproductive, to aim for the loftier forms of literacy if the basics are not in place.

In the past couple of years there has been considerable attention to the issue of adult illiteracy and much effort has been bestowed on developing workplace based approaches to literacy education to provide Australian workers with the base level skills required to function safely and adequately at work. At the same time Australian workplaces have been undergoing massive restructuring with greater and greater emphasis on high level skill development. It has become increasingly obvious as a consequence of this restructuring that the standards of literacy required to operate in these restructured employment situations, and indeed even to cope with the new demands of skill formation posed by the restructuring, have likewise risen dramatically to the point that some have argued that literacy/numeracy skills are not just fundamental to, but in fact are more important than, 'technical and job related skills'.[50]

The consequence is that all forms of literacy, including information literacy, have assumed a central place in the process of skill formation within the Australian economy. But the learning society extends far beyond these instrumental requirements for work based training as higher levels of basic literacy are also required for other kinds of learning that are possible in our information rich society.

The sixth and final use of the term currency was the somewhat quaint nineteenth century notion that native born Australians (currency) were inferior to their British born counterparts (sterling). While this myth has been rendered both obsolete and unacceptable by the increasing sophistication and cultural pluralism of Australian society over the past 200 years, it remains true that there is still a residual legacy in the form of the 'cultural cringe' and an almost atavistic tendency to prefer both information, and information technology from abroad. Not only is this injurious to our balance of payments but it is ultimately not in the best interests of our national culture either.

Recent advances in technology have made the world even more of a global village than McLuhan envisaged. Australians can now travel relatively easily to the most distant parts of their own country or to the rest of the world in order to learn; furthermore modern telecommunications effectively put a large proportion of the world's information at the disposal of people in their homes and offices. A recent report by the Department of Primary Industries and Energy entitled *Telecottages: the potential for rural Australia* advocates the locating of 'shop front' community teleservice centres in remote parts of Australia, where members of the local community, would have access to 'computers, printers and fax machines together with audio and video equipment (which) are used to communicate voice, pictures and written text electronically'. While, as the report notes, 'there is nothing more exotic than you would find in a large city office', the distinctive feature of the telecottage concept is that 'it is there for community use'[51] and can put people in contact with educational, social, employment, informational and other opportunities that they would otherwise be denied. Because, by international standards, Australia's telecommunications infrastructure is one of the best and most comprehensive in the developed world, there is the potential for Australia to lead, rather than to follow other countries in the extension of the learning society to remote and isolated communities.

If we are able on the one hand to avoid the worst excesses of importing culturally inappropriate ideas and technologies, and on the other of incorrectly assuming that Australia can reasonably exist in isolation from the rest of the world, the appropriate use of technology, and associated information literacy can open up for Australians everywhere learning opportunities and access to information that even a few years ago were unimaginable.

Conclusion

Just 150 years ago, on 26 July 1842, a thirty one year old lawyer from Scotland rose to his feet in the Queen's Theatre in Adelaide to speak on that quintessential Victorian subject: 'Self Culture' or, as we now call it, self directed learning. The newly appointed Advocate General for South Australia — William Smillie — was presenting the 'Introductory Discourse' for the year to the recently revived and amalgamated South Australian Literary and Scientific Association which had begun with such high ambitions eight years earlier in far away London. After the usual preliminary flourishes, Smillie launched into his subject with a spirited defence of the need for universal access to learning opportunities, irrespective of people's social rank, geographic location or occupation. 'It is our privilege,' he said, 'to live in times when the much vexed question will scarcely any longer be entertained, whether the great body of the people ought to be instructed. Knowledge, no longer confined to wealth or rank, no longer the depository of the cloistered sage, is all pervading as the light of heaven itself, and may be sought and enjoyed by every willing mind'.[52]

Animated by convictions such as these, and encouraged no doubt by much similar rhetoric from lecturers across the country, during the nineteenth — and on into the early twentieth century — our ancestors set up a nationwide pattern of institutions variously called mechanics institutes, schools of arts, literary institutes or, in the case of South Australia, simply institutes. Although there is no exhaustive list of them, more than 2000 were established, many of them in tiny and remote pioneering communities, and they became as much a part of the Australian landscape as churches, pubs and one teacher schools. These institutions, whether humble or ornate, are scarcely recognisable to the information specialists of the last years of the twentieth century as the forerunners — which indeed, both literally and metaphorically, they are — of the community educational and library services that we enjoy today. But they provided people with access to books, journals and newspapers, they offered a forum for learning about, and discussing, everything from local concerns to the best that was then known about history, philosophy, literature, science, geography, psychology, and current affairs, and in many cases they also offered classes in what, today, we would call basic literacy and numeracy.

In a country that was shaped by distance — both the distances within the continent itself and between Australia and other parts of the world, especially Europe — these remarkable and widespread institutions answered the need for information, as well as going a long way towards developing the capabilities required to make the most of the information that was then available.[53] In this sense, they laid the groundwork for the information society that we have, and of the learning society we may yet become.

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WORKSHOPS

Integrating information literacy into teacher education
Kym Adey

Media literacy and social justice
Barbara Biggins

Skilling the workforce
Margaret Carruthers

Industry and information — a fundamental connection
Robert Cother

Between communications and citizenship — the critical role of the public library in information literacy
Jenny Cram

Supporting a competency based training curriculum — the library's role
Anne Floyd and **_Robert Burnheim_**

You're working harder...but are you working smarter?
Jan Gaebler and **_Ray Price_**

Implementing information literacy programs in a school environment
Sandra Gapper and **_Judy Styles_**

Information needs of business — the provider/consumer partnership
Marilyn Harlow and **_Jill Miller_**

Open and flexible learning: information literacy as a key competency
Chris Harrison

The continuum of information literacy between TAFE, school, and higher education: development of an agenda
Fran Hegarty, Bea Donkin, Erika Dunstan and **_Rose Humphries_**

Information illiteracy — barriers to successful education
Christine Jessup

Information literacy — changing roles for information professionals
Joyce Kirk and **_Ross Todd_**

Course design and delivery: librarians and teacher librarians working with educators to maximise information literacy skills for students
Paul Lupton

MFP or MFP — the 2020 vision of information services
Philippa Middleton

Decisions are only as good as the information on which they are based
Janice Nitschke, Susan Arthur, Carolyn Gerhardy and **_Ursula Hickey_**

INTEGRATING INFORMATION LITERACY INTO TEACHER EDUCATION

Kym Adey
Dean Faculty of Education University of South Australia

A number of issues that are central to those involved in preservice teacher education were addressed.

These are

- *Current issues in teacher education (eg DEET paper on teacher education, NPQTL review of competencies, State Committee, increasing participation rates)*
- *The perspective of the Australian Council of Deans of Education*
- *The structure and delivery of preservice teacher education*

In addition, time was devoted to theories of learning and how they relate to the debate on information literacy.

I have assumed that the specific reason for asking me to address this topic rests with ongoing concern that we are not preparing teachers for the increasing demands posed by information literacy. While I understand this concern, it is necessarily a simplistic view of a highly complex area. The following paper highlights these issues and, implicitly, points to areas for further review and research.

In general terms, it appears that there is consensus about a broad definition of information literacy. It seems reasonable to assume that it focuses on the ability to 'locate, evaluate, synthesise and apply information'. Given the extraordinary explosion in information, this complex of skills should not be underestimated. This is obviously true when it comes to differentiating between good and bad information. It is especially true when individuals are required to apply information. I stress this point because our society is increasingly predisposed to accept information which is highly context bound and presented in short, intense 'grabs'. This is particularly evident in the commercial sphere and also in the presentation of social, economic and political information. This is typified in the increasing reliance on visually presented information at the expense of the written form. This point could be expanded on at length. However, it is made by way of emphasising that the society in which our education system is bedded is increasingly reliant on information forms and learning modes that could be argued are contrary to the basic tenets of information literacy. It is within this context that we prepare our teachers.

Teacher education is often presented as if it only relates to preservice courses. In reality, it should be seen to exist on a continuum from pre-entry to ongoing inservice throughout a teacher's career. It is worth focusing on three phases of teacher education to illustrate the different issues at stake. Namely, pre-entry, preservice and inservice.

At face value, the students we attract into our preservice programs have never been better prepared. In spite of a severe downturn in demand for teachers, year 12 cut off scores for these courses have arguably never been higher. Entry is extremely competitive and many applicants are turned away. However, what do we know of those who are successful? It can be, and is, argued that they are the products of an assessment driven secondary system that necessarily places emphasis on test results. In addition, pressures on teachers have been complicated by the rapid increase in participation rates through to year 12. In short, the secondary system is often described as excessively prescriptive, with its prime emphasis being on the relatively short term retention of specific information. Further, it supports the unquestioning acquisition of that information. Many teachers would rightfully protest such a simplistic snapshot of priorities in secondary schools. However, there is more than a grain of truth in these characteristics which emerge as a direct outcome of the severe time constraints which typify their schools. Students who are successful in the system, as evidenced by examination results, are those who enter our preservice teacher education courses.

Before leaving secondary schools, it is worthwhile pointing out that the majority of the teaching force, as emphasised in recent national surveys by DEET, have already been teaching for approximately twenty years. Changes in that time, coupled with limited professional development options, cast something of a shadow over the contemporary nature of schooling. This is not meant as a criticism of teachers, but it does serve to emphasise that rapid changes in information, and the means of accessing it, demand that schooling systems are responsive. The general call to place greater emphasis on the quality of teaching and learning is made that much more difficult by the resource reductions evident across the country. Those who would criticise teachers in schools are frequently insensitive to, or unaware of, the extraordinary changes and challenges which have typified education over the last twenty years. It is unfortunate that we tend not to acknowledge the progress we have made. Having said that, it is clear that much more needs to be done to improve the ongoing professional development of teachers and the general resourcing of schools.

In the midst of the above, we should be concerned that there is a growing link between information literacy and resource allocation. The link between resources and information technology is illustrative of this point. Clearly it costs money to establish the technology and program infrastructure which facilitates the capacity to tap, and process, information sources. This is a worrying trend in that there is a clear link between access to information and opportunity. It can be argued that variable access will actually polarise societies into information 'haves' and 'have nots'.

It is a concern that the education of pretertiary students is often typified by a learning style which focuses on the acquisition of information rather than its subsequent analysis. As indicated earlier, this point can be overdrawn but the fact remains that there has generally been insufficient change in the nature of educational challenge to students prior to entry into teacher education preservice courses. The fundamental elements of information literacy are, arguably, not sufficiently evident in schooling or society at large. It is within this context that preservice teacher education courses are grounded.

Preservice teacher education has changed significantly over the last 20 years. However, there are those who still argue that it has not moved far enough or fast enough. It is a fact that most courses now provide subjects in computer literacy and communication. It is also true that there is generally an increasing emphasis on library skills. However, the latter feature should be coupled with the downturn in resources available to many university libraries.

The recent federal government policy statement, *Teaching counts*[1], serves to reinforce the federal government view that many teacher educators in universities are out of date. This arises from the observation that most are many years removed from schools and classrooms. However, it must be remembered that, like other university courses, teacher education programs are subject to regular reaccreditation and other external scrutiny through course advisory groups. It is also true that the study leave options for these teacher educators enables quite frequent periods of professional development. It is clearly short sighted to claim that an ageing teacher education force in universities leads inevitably to programs and methodologies being outdated.

While I have defended the current teacher educators responsible for preservice programs it is, nevertheless, true that a generation of academics has been lost to universities since the late 1970s. It is important that restructuring of university faculties makes provision for the introduction of new and younger staff to ensure that there is a base for long term course delivery.

The issue of restructuring is evident in many universities in Australia. It is especially true of Faculties of Education which have experienced progressive reductions in intakes, and therefore of income. This long term trend shows little sign of slowing. Within this context, these faculties will be forced to 'down size' and review the way they deliver programs. It could be argued that this will offer impetus for the introduction of a greater reliance on resource based and student centred learning. If this is an inevitability of restructuring, and there are already signs of it, it will require that skills associated with information literacy are more manifest in course expectations. As indicated before, this needs to be set against the outcomes of societal values and our schooling system. Both of these significantly 'flavour' the skill base and expectations of students entering preservice courses.

Inservice teacher education is an area of great need. As indicated earlier, I believe it is grossly underfunded in our current system, and has been for some time. The significance of this is emphasised when it is realised that the vast majority of teachers who will take our schools into the next millennium are already teaching. Their ongoing professional development must be a priority and, within this context, increasing emphasis on their information literacy and their capacity to impart it to others should receive significant attention.

The Australian Council of Deans of Education is a strong supporter of the need for increased professional development for teachers. However, it also holds that this should be approached at the state level. There is an increasing government acknowledgement of the need to provide for professional development for teachers. What is in question is the means of funding it. It is one of the ongoing contradictions in our system that resource limitations for education are coupled with a cry for improvement in standards. I do not believe that many who call for change actually appreciate the change already accommodated by teachers, nor the general pressure of their responsibilities. It is arguable that the current career structure offers insufficient incentive for professional upgrading by teachers. It is also true that existing conditions for registration place no requirement on ongoing development. There are many education systems in the world that require continual updating, and reward it. What has this to do with information literacy? I simply do not believe a truly information literate student body will emerge without a significant rethink of how we provide for the continuing professional development of our teachers.

Let me leave this brief paper with a series of questions. If you were given the responsibility of implementing changes to ensure that information literacy was a focus of our education system, would you

- set out to ensure everyone acquired highly developed information literacy skills in order that they could effectively face the challenges of contemporary society or

- design a system that ensured that a few acquired these highly developed skills and the remainder basically acquired information?

Given what I said earlier about the link between resources, information and opportunity (or even power), which is the more likely outcome? What implications might be drawn from this?

Recommendations

1 As teacher education is lifelong, not just three to four year programs, employers of teachers must be influenced to facilitate inservice education, particularly for teachers who were not themselves educated in the context of information literacy

2 Attitudes to curriculum are revised to facilitate information literacy

3 Attitudes to methods and curriculum are changed to recognise that education is increasingly technology driven and there is a need to prepare materials with which students interact

4 Provide inservice training in information literacy for current teacher educators

5 Persuade employers to acknowledge responsibility for providing inservice opportunities for those already in teaching to encounter the concept of information literacy

6 Commission research into current practices by which academic staff keep up to date

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MEDIA LITERACY AND SOCIAL JUSTICE

Barbara Biggins
Librarian Child, Adolescent and Family Health Services
assisted by ***Steve Bartholomew***, President South Australian Association for Media Education and ***Diane Bradley*** Media Awareness Program Australia

It's a worldwide trend for people to get their information from television — and to rely on it... In 1987, the number of Americans who got all their news from television reportedly surpassed 50 percent for the first time... at the same time, television has driven a lot of competing newspapers out of business SIPISCOPE 16(2) Spring 1988 p20-26

- *How good are we at sifting the information given us from the mass media? Do we know who is speaking to us and when?*
- *Do we need to, and can we, teach our children, and ourselves, how to read the media?*
- *Where do we develop media literacy skills?*

Following an introduction by Barbara Biggins, Diane Bradley gave a sample session from the MAPA program and Steve Bartholomew presented part of a session from the South Australian Education secondary media studies curriculum program

Introduction

Much attention is paid to literacy and the importance of the three Rs. Very little importance is placed on media literacy, and yet we all need to be able to read the media.

Today we intend to let you experience two different types of media literacy programs — one for adults and the other for students.

Issues for discussion

We all attend to the mass media. Television is in 98 percent of Australian homes; videocassette recorders are in 70 percent. Children spend more time on average, over their school lives, with television than in school. More Australians rely on television as a source of news than on either radio or newspapers.

According to Neil Postman

> We are by now well into the second generation of children for whom television has been their first and most accessible teacher, and for many, their most reliable companion and friend. To put it plainly, television is the command centre of the new epistemology. There is no audience so young that it is barred from television. There is no poverty so abject that it must forgo television. There is no education so exalted that it is not modified by television. And most important of all, there is no subject of public interest — politics, news, education, religion, science, sports — that does not find its way to television. Which means that all public understanding of these subjects is shaped by the biases of television[1]

Whose views do we get from television?

Once there was a concern about the cultural imperialism of the British. Now there is a similar concern about the effect on our culture of the large amounts of American television seen on our screens.

We need also to be concerned about the concentration of ownership of the media in Australia. A diversity of media outlets and owners is needed to provide that diversity of voices and opinions necessary in a democracy.

We need to be concerned about the role of the commercial sponsor in shaping the content of programs we see. We need to jealously guard an advertising free Australian Broadcasting Corporation. Once advertising is taken, then program makers are under pressure to program for mass audiences: programming for diversity and to provide unpopular viewpoints is squeezed out.

Is what we see on the mass media real information anyway?

Postman observes

> The idea is to keep everything brief, not to strain the attention of anyone but instead to provide constant stimulation through variety, novelty, action and movement. You are required... to pay attention to no concept, no character and no problem for more than a few seconds at a time... The result is that Americans are the best entertained and quite likely the least well informed people in the Western world... I am saying that we are losing our sense of what it takes to be well informed. Ignorance is always correctable, But what shall we do if we take ignorance to be knowledge?[2]

Have we the tools to evaluate what we see on television and to talk back to our sets? Who can help us and particularly our children?

Unfortunately media studies in schools tends to be cut out when budgets get short. These courses for children, at all age levels, are vital for a media literate society. Australian Teachers of Media (ATOM) and the state associations of media teachers provide professional support and advocacy in most states.

Some community groups work with parents to raise their awareness of the medias' roles. These groups include the Australian Council for Children's Films and Television and its state branches. Media Awareness Program Australia is a newly introduced adult program.

Librarians concerned for media literacy, and for a well informed Australia, could use and advocate for these agencies.

Recommendations

1 Effective media education programs are available to **all** students in schools and the tools to read the media critically are taught in context

2 Proper resourcing and training occurs to ensure that the general community, from preschool to senior citizens, has adequate access to media literacy programs

3 Critical awareness of all audiovisual sources of information, especially TV are considered as an aspect of information literacy

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SKILLING THE WORKFORCE

Margaret Carruthers

Senior Teacher, Workplace Education Service Adelaide College of TAFE

Issues on which group discussion focused

- *Language, literacy and numeracy skills involved in manual jobs — using a local government program as an example*
- *Strategies required to assist workplace education providers to solve the problem of lack of resources available to workplace training programs*
- *Strategies required in relation to demands from workers in industrial areas — nontraditional users of libraries*

Introduction

Rosie Wickert's research conducted in 1989[1] on literacy skills in the community showed results relating to specific tasks eg reading a timetable, using deposit slips, pay slips. The results from this survey are indicative of the situation in most workplaces.

Topics for discussion

Differences between TAFE onsite literacy/language class and a class operating in a workplace.

The classroom

The classroom setting in TAFE college is predictable and conforms to TAFE requirements. However, in a workplace setting it can be noisy, smelly, cramped and with few educational facilities. The teacher at first is a visitor in the environment, often alienated. The usual resources, including computers are not available on site. The teacher therefore has to carry books, equipment etc to the classroom and back again.

The learners

The learners come to class with common interests, knowledge, concerns and worries. They sometimes bring personal antagonisms with them — particularly if they work closely with one of the other class participants.

Class grouping is often dependant on those workers who are able to be released at the time of the class.

The curriculum

There is no set curriculum as the program is tailor made to the needs of each particular company and to the needs of the participants. This often requires liaison with management as well as a detailed training needs analysis. A TAFE onsite class on the other hand caters to the needs of individual and often conforms to a set syllabus.

Stakeholders

There are many more stakeholders in a workplace setting. These include management, workers, unions,TAFE and sometimes other government funding body.

Assessment and evaluation
Assessment is competency based — using forms, performing tasks (sometimes oral as well as written). Evaluation reports are written for management as well as union and TAFE. Evaluation in a college based program is usually for TAFE management.

Organisational culture and politics
Each work site has its own work culture and the teacher needs to be aware of any disquiet, problems or hierarchy existing in that worksite. This is far more complicated than having to walk into a set environment in a TAFE college.

Resources
The resources are often drawn from the particular worksite eg magazines, newsletters, notice-boards. Resources have to be physically carried to the site, often using trolleys!

Purpose for reading
Reading in the workplace is generally reading to do. In the professional areas reading is often to gain knowledge.

Two categories of text types encountered in the workplace can be identified

- written texts associated with performing the specific job. These are often procedures and short reports
- workplace in general — minutes, memos, notices and summaries of legislation

The class in the workplace would draw largely in these two types of materials.

Library action research

My experience over the past year has been with local government bodies and in the course of those programs, I arranged a visit to the local public library. I also conducted a small survey of the people in the course about their attitude to the library.

The results were as follows

- Only one person belonged to a library
- 25 percent of the group had never been in a library before

The fact that a library is a foreign place to many workers combined with the fact that they have low reading skills means there are implications for librarians in making the libraries accessible.

Issues as a result of open discussion

- Need to encourage reading by making resources from libraries available to workers
- Need for resources to be taken to the worksite eg a bookmobile or bus
- Where do workplace students go at the end of their courses? Is TAFE offering follow on programs?
- Importance of alerting managers to the need for readable materials in the workplace
- Isolation of the teacher
- Culture of the workplace — difference between sites

Recommendations
1 Ongoing consultation between workplace education providers and public/TAFE library professionals to support programs and participants

2. Research to establish how workplace education programs can be effectively resourced, including the establishment of standards for workplace education centres, and the provision of better access to libraries for participants in literacy programs

3. Research to establish the best means to bridge the gap between workplace programs and the wider community and how continuing support from librarians can be made available, for example
   - in the workplace
     - alerting of managers to the presentation of appropriate written material for the workplace
   - in libraries
     - close cooperation between public libraries and workplace education program providers
     - development of an appropriate culture amongst library workers
     - extension of borrowing rights
     - use of dedicated space in public libraries

References

1 Wickert, Rosie *No single measure: summary report* Canberra DEET 1989

INDUSTRY AND INFORMATION — A FUNDAMENTAL CONNECTION

Robert Cother
Director, ETHOS Australia

The workshop focused on management's ability to effectively access and evaluate information for problem solving and decision making. It explored whether managers regard information as a valuable and essential resource

Recommendations

1 Investigate how information use is dealt with as part of best practice and benchmarking within companies

2 Identify the information products (both quality and formats) that the clients need, including tailored services, database searches and scanning

3 Identify the company information gatekeepers, expand the role of the information specialists and develop information literacy within companies. For example the provision of information, professional publicity and establish links between the parties

BETWEEN COMMUNICATIONS AND CITIZENSHIP — THE CRITICAL ROLE OF THE PUBLIC LIBRARY IN INFORMATION LITERACY

Jenny Cram
Manager of Library Services, Department of Education Queensland

Workshop participants examined the central role of the public library in guaranteeing equity of access and strategies for promoting information literacy among public library users, and develop a list of critical success factors for removing such barriers and improving information literacy.

Outcomes of the workshop included

- *List of barriers to access users of public libraries may encounter*
- *Suggested strategies public libraries can adopt to put information literacy on their agenda and to promote information literacy among public library users*
- *List of critical success factors required to remove barriers and improve information literacy*

Introduction

There are three main kinds of relations between communications and citizenship.

- People must have access to the information, advice and analysis that will enable them to know what their rights are in other spheres and allow then to pursue these rights effectively
- People must have the broadest range of information, interpretation and debate
- People must be able to recognise themselves and their aspirations in the range of representations offered within the central communications sectors and be able to contribute to developing those representations.

The workshop will consider the assumptions public libraries make about

- information provision
- information requirements
- formats for presentation of information and the capacity of library users to identify information needs
- search strategies and what qualifies as success in information retrieval

Barriers to access users of public libraries may encounter

- Field of vision (model p89)
  of library workers
  of users
- Categorisation of users (model p90)
- Precious definitions
  of what constitutes 'information'
- Reductions in resources and staff

THEORETICAL MODEL OF LIBRARY AND INFORMATION SERVICE AS A "FIELD OF VISION"

Influences:
The interpretation of significant personal events which have a bearing on the beliefs a librarian forms about users, librarianship, the role of libraries, the relative importance of various types of information, the information needs of users, etc

→

Field of Vision:
The manner in which a person perceives the world, his or her role in the provision of of library services, information, etc.

↑

↓

Field of action
The practice that eventually occurs

←

Task definition
The way a person determines the task which is to be performed

THE TRADITIONAL APPROACH: OBSERVER DEFINED CATEGORIES OF USERS

Criteria groupings	Individuals	Groups
Demography	Age Race Ethnicity Income Socioeconomic status Education Gender Occupation	Aggregated statistic of same kind Demographic profiles
Personality/psychology	Cognitive flexibilities Apprehensions Cognitive styles	Aggregated profiles
Communication literacies/abilities	Computer Reading Language Interpersonal Analytic Cognitive Ablebodiness	Aggregated statistic of some kind
Location of transaction	Home Work Entertainment centre Retail outlet Library	Own vs other turf
Lifestyles	Hobbies Interests Culture	Aggregated profiles
Purpose of system used (observer defined)	Inform Entertain Escape Instrumental Social Cultural Political Economic	Same
Content focus of system used	Topic	Same
Affective evaluation of transaction	Liking Satisfaction	Aggregated profiles

THE ALTERNATIVE APPROACH: ACTOR DEFINED CATEGORIES OF USERS

Criteria groupings	Individuals	Groups
Actor's situation	Nature of barrier Complexity Power Barriers Specificity	Same applied collectively
Gaps in sense making	Questions asked Confusions faced Misunderstandings missed Anomolies faced	Same applied collectively
Actor defined purpose	To get ideas Find direction Surveil Acquire skills Get support Be happy Achieve goals Belong Design Discover Stimulate Be heard Connect with others Get diverse input	Same applied collectively To surveil Educate Interconnect Achieve consensus Raise morale Anchor culturally
Information using strategy	Browsing Formatting Grouping Highlighting Indexing Formulating Citing Connecting Networking Interpreting Transmitting Skimming	Same applied collectively
Information values	Timeliness Depth Breadth Adaptability Specificity Quality Accuracy Touchability Moveability Newness	Same applied collectively
Information traits	Quantitative/qualitative Hard/soft Clinical/census Single point/options Precedence/futures	Same applied collectively

- **Terminological problems in librarianship**
  Even a supposedly mature area like reference instruction is confounded by the lack of functional, working definitions. The problem of definition is seen as well in the slow advance of decision support systems and other expert systems applications in reference services. Computers cannot tolerate the ambiguity of typologies operating in libraries or the titles assigned by publishers and authors. Is a person to be accused of information illiteracy for not understanding what a dictionary does when a 'biographic dictionary' presents no lexical information or when a 'dictionary catalogue' has nothing to do with diction or lexicology and lexicography, but has everything to do with orthography?

- **The complexity of libraries**
  Is the complexity of libraries, the difficult way in which they provide information, one reason why special skills are now needed?

  Certainly the complexity of information forms and systems as well as the problem of mass and rapid changes in technology are forces behind the information literacy campaign. The need for a more sophisticated user points up certain failures in the information professions, industry, and centres, despite the rhetoric of user friendly delivery and the service ethic preached by librarians.

  The thrust in information literacy to adapt generalized human behaviour to the idiosyncrasies of libraries does not abrogate the library's responsibility to make its practices relevant to people and its language generally understandable. To conceive of and develop information service programs, it is important to understand the limitation of libraries to respond to all information needs with precision, relevance and clarity. It is crucial to correct the library field's internal problems before trying to foster information literacy in users. After the propaganda and the jargon come the more substantive obligations of libraries and librarians. Libraries must improve their delivery capabilities. They must streamline and simplify, or at least make real, complexities more transparent to users, and clarify the language of information services

- **Inadequacies in the delivery capabilities of libraries**
  Most libraries are severely limited in the kind of services they provided, the kind of information to which they can gain access. Even when they use modern information technology, the information librarians provide is frequently out of date. It would take a library revolution to respond to the all encompassing skills information literate people would possess to the meet their needs as totally as the vision of the information literacy movement. For libraries, to customise information delivery for specific needs would require a revolutionary change in the library world. It would require an equally revolutionary increase in funding

- **Inadequate funding to address inadequacies**

- **Motivation for espousing information literacy as a project**
  Funding may be a hidden agenda in the information literacy propaganda. Is this campaign launched to gain more resources, or because libraries have adequate resources to accomplish the task they now address with this idealistic program?

- **Lack of equity of access for people with literacy, physical and cultural disabilities**
  Reluctance from public libraries to fund and staff these areas as they would have to reduce the level of service to the general public. This barrier could be seen as view of public library of what constitutes the 'general public'

- **The increasing availability of technology**

  to and in libraries could be seen as a danger in that, because of its great capacity to find data, starts to create, in libraries, a shift away from organised knowledge schemes to a more randomised access to information.

  In general, data will mean more or less unconnected 'facts', information will refer to data that have been fitted into categories and classification schemes or other patterns; and knowledge will mean information that has been further refined into more general statements.

  We are creating an online environment which will result in a higher level of confusion and anxiety for users. Maximising retrieval can lead to information excess, and information excess can lead to intellectual distress

- **Government information dissemination policies**

  Current confusion of institutional roles and responsibilities, or who publishes what? Effect of sale of government databases compared with sale only of services derived from those databases. Effect of agencies wholesaling their information products compared with retailing them. Policies on charging and their relationship with relevance of the information to significant public policy issues

- **Privatisation of information sources**

- **Quality of local schooling**

  Effective learning and teaching with adequate provision for resource based enquiry

- **Librarians not fully grasping the affinity between information, processing skills and cognitive (critical thinking) skills**

- **Volume of information**

  Difficulty of selecting most appropriate and rejecting less appropriate

Suggested strategies public libraries can adopt to put information literacy on their agenda and to promote information literacy among public library users

- Build alliances with nonlibrary administrators, civic and religious leaders, educators, and academics
- Greater cooperation with other information agencies

List of critical success factors required to remove barriers and improve information literacy

- The imperative behind information literacy must be internally motivated, the individual must be in fear of missing out, of becoming information illiterate
- Support of literacy in public libraries and schools
- Remove ambiguities in library jargon
- Market only what libraries can deliver

  Librarianship's embrace of the ideology of information literacy means adopting a cause that is bigger than the field itself. that cause incorporates the support of literacy in public libraries and schools. It subsumes all the goals of bibliographic instruction in academe. It requires librarians to transcend their own rhetoric, to dispel ambiguities in their own jargon, to be sceptical of their own propaganda and to market only what they can deliver

Recommendations

1 For all library staff

- commitment to information literacy is incorporated into all staff's position descriptions and staff development.
- provide evidence of understanding and commitment to working with users to facilitate their individual and collective access to and use of information

2 Alliances are established with nonlibrary administrators, city and religious leaders, educators linked to the library's marketing and strategic plans

3 Information literacy is part of the common agreed culture of the workplace/institution
4 The Australian Library and Information Association draft a statement acknowledging the equally important roles played in information provision by all types of libraries, and examines mechanisms to enhance networking between all library types and all members of the profession

5 The Australian Council for Libraries and Information Services sponsor a project to simplify and unify library terminology

6 Consultation processes are established, which would allow the impact of specific projects and proposals to be evaluated prior to implementation

SUPPORTING A COMPETENCY BASED TRAINING CURRICULUM — THE LIBRARY'S ROLE

Anne Floyd
Senior College Librarian, Mt Gravatt College of TAFE

Robert Burnheim
Librarian, Learning Strategies Support Queensland TAFE Library Network Centre

The uptake of competency based training curricula provides many opportunities for libraries to become active participants in the delivery of curricula. Using data collected from a state wide study on library involvement in the delivery of this style of curriculum, this workshop focused on the services and roles expected of the library by teachers. Following the presentation of the data, the workshop participants discussed and compiled action plans to ensure that the teacher expressed needs are met and than ongoing cooperation in the delivery of the curriculum is maintained. Primary focus was on those activities that involve application of the skills inherent in mastering the effective usage of information

Introduction

From March to July 1992, Library Network Branch of TAFE-TEQ Queensland conducted a series of workshops to investigate the library services required to support the delivery of a competency based learning curriculum.

These workshops not only investigated the topics, but also gathered information on what the term competency based training meant to the participants; how the delivery of a competency based training curriculum would affect teaching techniques and styles; present library services that were seen to be beneficial and the forces working against the supply of library services to support competency based training curriculum.

Approximately 230 teachers and library staff from TAFE and Senior Colleges in Queensland participated in the workshops. The breakdown of attendance was 82 percent teaching staff, 18 percent library staff, and in some sites, senior college administrative staff. This mix provided one of the highlights of the activity as at each location, positive feedback was received about the fact that the workshops brought together, from several colleges in the same area, teachers from a variety of subject areas and library staff. It would appear that such gatherings are not the norm!

This paper can provide only a brief overview of the responses gathered; a copy of the full report is available from Library Network branch, TAFE-TEQ Queensland.[1]

What does the term competency based training represent?

The 164 responses to this question revealed a wide range of concepts and ideas that are associated with the term competency based training. It was observed that there was often no sequence or organisation to the discussion indicating that perhaps this shows a curriculum model needs to be used to understand the concept. Some order can then be imposed on the confused mish mash of terms enabling thoughts about competency based training to be focused and clarified.

A second observation that arose from this section of the workshop was that with the introduction of competency based curriculum, a curriculum installation process had not been followed. Most curriculum models can be divided into three stages: design, implementation, evaluation. This study provides evidence to support the idea of including installation as the second stage of a then four stage model.

How does competency based training curriculum affect curriculum delivery and teaching techniques?

The 301 responses to this question resulted from direction to the participants to focus on climate, industry, prior needs, role of the teacher, role of the student, delivery, evaluation and assessment, and resourcing requirements.

A minority of participants suggested that there would be no change to teaching techniques and/or curriculum delivery with the implementation of competency based training. These participants were generally those who felt that they had been teaching to a competency based curriculum for some time and therefore it would continue to be 'business as usual'.

Other participants identified some major effects on teaching techniques and/or curriculum delivery as

- perceived change in the role of the teacher from controller to a manager/facilitator of learning

  Do all students require to be taught?
  Are some capable of working through a well designed program individually?

  We suggest that the answers to these question is yes. However, unlike some teachers who felt that their role would collapse to that of a bookkeeping, timetabling director of learning, we would argue that delivery using selfpaced/individualised methods will give rise to superteaching methods.

  - Teachers will need to call upon a wider range of strategies, delivery styles and techniques than ever before
  - Teachers will be frequently working with smaller groups or individual learners
  - Teachers will need to be able to identify learning difficulties and preferred learning styles and be able to accommodate them so that students are able to achieve competency

- students need to become more responsible for their own learning

  Coupled with the previous comments it becomes obvious that students would not be as closely supervised as they may have been previously. The progression through the set of learning activities to the achievement of competency will, by and large, be self regulated. This is due to several reasons

  - Some students would be working outside the workshop or classroom
  - Not all students would be working on the same unit of study at the same time
  - Teacher would be concentrating on the students that need teaching — those capable of independent study will only work with the teacher when they have a problem or need evaluation or assessment
  - There would be a need to teach students how to undertake competency based learning and to indicate to them the self responsibility required before expecting them to learn using this approach

- a caring climate is needed

  With classes split due to selfpacing or working in different locations, care must be taken to maintain the teacher/student bond. Teachers were emphatic that this must be maintained to ensure quality of learning. Students must feel comfortable with the demands placed upon them by the curriculum. They must be aware that the teacher is available to assist rather than hinder their learning

- student progression through the curriculum may be selfpaced

  The rate of student progression may be influenced by the modular nature of the curriculum, recognition of prior learning, assessment to one set standard, and time parameters. There may be a host of delivery methodologies, including selfpaced learning.

What library services are required to support competency based training curriculum?

The 281 responses to this question were divided between the areas of climate, building, communications, organisation, services and resources.

The services that teachers most often stated they required were

- the library should be a dynamic environment, actively responsive to the changing needs of the user, including teachers, students and industry
- wide user access to present and future communications technologies
- advice from library staff on resource availability, particularly when new or revised curricula are to be planned and implemented
- development of information literacy skills, for both teachers and students, in both formal and informal modes of learning
- resource management services including how to use available resources for maximum effect and circulation management services

Existing library services that are seen to be beneficial and valued

Teachers were aware that the services that are currently provided are done so under staffing and funding constraints. The 165 responses to this point were grouped under the headings of climate, building organisation, services and resources.

Some of the statements made by teachers addressed or were based on

- library staff were seen to be supportive, cooperative and had a positive approach
- the effectiveness of circulation management practices within libraries, the use of variable loan periods, serviced sectional collections, reserve collections, circulation of new resources lists and contents pages of journals
- a proactive, consultative resource acquisition program. A special mention was given to the quick delivery of resources in emergencies
- the widening library network from which interlibrary loans can be obtained to support a changing curriculum
- extension of opening hours
- educational services provided by library staff. Specific mention was made of library promotion and orientation, research skills and information usage programs, training to use CDRom databases and in content skill development

- where cooperative teaching was taking place, teachers indicated that this should continue and where possible be extended

What is blocking the delivery of effective library services?

The 238 responses to this question centred around building, climate, telecommunications, curriculum, organisation, personnel, resources and the role of the student issues:

Common blocking statements included

- the unsuitability of the current style of library building. Comments centred on congestion, overcrowding, lack of design flexibility, poor design and layout

- the library's profile in the college is too low. It should instead be seen as a contributing partner in the teaching process

- limited communication between teachers, administration and library staff. The climate for communication within the college was not enhanced by limited feedback cycles, gaps in information channels, lack of planning information and limited meeting opportunities. Where library staff were part of the senior administration team, climate difficulties were not as severe

- limited internal/external telecommunication links. Where college based computer networks were being installed or upgraded, linkages to the library catalogues should be included

- lack of lead time between receipt of the curriculum and its implementation. This meant that teachers did not have enough time to consult with library staff regarding resources availability, and then for library staff to acquire additional or new resources. Consequently the commencement of curriculum implementation was impoverished

- library staffing levels were not adequate

- library opening hours were not adequate

- student motivation to extend their knowledge beyond the base required for competency. Participants considered this with respect to the selfdirected, lifelong learner concept

What needs to be done — activities and interventions

Action plans to remove blockages to effective library services were discussed at college, regional and state levels as the final activity in the workshops.

Conclusion

There may be little new in the workshop report. However we found the process satisfying for several reasons.

- We captured a statewide picture of a curriculum style being put into place
- We gathered information from the workplace
- We achieved a positive outcome in that a range of staff were brought together, discussion on matters of common interest took place and, as a result, stronger and in some cases, new, working relationships were forged.

Even though this report revolves around the concept of competency based training, the issues identified are applicable to the wider stage. Education is becoming more responsive to client needs and is also reacting to various inputs such as award restructuring, the economic climate and reports such as Finn, Mayer and Carmichael.

The challenge for librarians is to ensure they remain dynamic, responsive to change, and highly effective managers of resources. The development of partnerships between teaching staff, library staff and all others involved in the education process is the focus for the future.

Recommendations

1 Promote development of National Guidelines for resourcing TAFE libraries and endorsement by the appropriate national body eg MOVEET

2 Establishment of national, state and local campaign to implement the guidelines

3 Promote a national, state and local impetus towards a partnership with libraries in curriculum design and development at all levels

4 Development of cross sectoral networks to share and support information literacy programs

5 Identified information literacy learning outcomes are integrated into courses at national and state levels

6 Development of partnerships between library and teaching staff at the course implementation level

7 All national standards for libraries, commensurate with their responsibilities to support learning outcomes, are implemented urgently

References

1 Burnheim, Robert and Floyd, Anne *College library services to support competency based training: new roles, skills and partnerships* Workshop report Brisbane Library Network Learning Support Branch TAFE-TEQ 1992

YOU'RE WORKING HARDER... BUT ARE YOU WORKING SMARTER? PUTTING BUSINESS INFORMATION TO WORK

Jan Gaebler
Research Librarian and Information Manager, State Bank of South Australia

Ray Price
Information Manager SOLA International

This session explored the importance of knowing how to find and then use information to contribute to both personal and company productivity.

It was designed as a practical session which provided challenging examples, humorous role playing, and stimulating debate to demonstrate the importance of information literacy to the business sector

Business literacy is the middleman between basic literacy and scholarly literacy. It is about knowing information sources, their limitations and achieving that precarious balance between time, information, cost and decision making.

Successful business relies increasingly on business intelligence to give it the competitive edge in the technological, global, high pressure market of the 1990s. It is about striving to be best, the most knowledgeable and capable of making the best decisions.

An information specialist, with access and expertise on how to use directories, statistics, databases and forecasts is a lynchpin to the success of the business. An ability to assess what and how much information is required, identifying the real question and then providing just the right amount of properly packaged information, to the appropriate person, is the key to being successful in this role.

Recommendations

1 Influence the education system to encourage investigative learning and critical analysis

2 Librarians need to convince the business sector of the value of information literacy

IMPLEMENTING INFORMATION LITERACY PROGRAMS IN A SCHOOL ENVIRONMENT

Sandra Gapper
Manager, Resource Centre, Adelaide West Teacher and Student Services Centre

Judy Styles
Teacher librarian, Aberfoyle High School

Focus of the workshop

- *Where are we now?*
- *Models of good practice*
- *Impact of the South Australian Certificate of Education in schools and the wider community*
- *Impact of resource based learning and information literacy on R-10 learning and teaching*
- *Issues and concerns for future action*

The workshop posed questions as the basis for discussion on the three major aspects of the role of teacher librarians when working collaboratively with classroom teachers to develop information literate learners. These are

- Training and development
- Curriculum planning
- Team teaching

Training and development

Does your staff have a shared belief of learning and of the implications for teaching?

Who is going to provide training and development for the staff?

What is your staffs' level of understanding of the need to change and what this means?

Do they have an understanding of the information process and the way skills need to be incorporated into units of work?

Do they understand that information literacy skills are developmental and need continual reinforcement?

Are they aware of the assistance that you can give them in planning units of work, obtaining resources and team teaching?

How is this managed and organised?

Curriculum planning

Does your school have a resource based learning/information literacy focus?

Is it a priority on your staff development plan? If so is there an overall plan for implementation and development?

Are you involved in team meetings, year level meetings etc?

What is the curriculum planning process in your school? How are teaching programs developed? Are you involved?

Do you plan resource based units of work with individual teachers?

At what stage of the teaching process are you involved — planning/implementation?

What aspects do you think need to be considered when planning a unit of work?

How are information skills incorporated into units of work?

What strategies do you use for teaching specific skills? Are they varied?

What strategies do you use for coping with individual differences in a class?

Team teaching

What role do you play in developing information literacy skills?

Do you assist classroom teachers by teaching specific skills?

Do you assist groups of students to develop skills?

Are you involved in the evaluation of resource based learning programs?

Information skills and understandings[1]

> *Information skills which involve the capacity to recognise a need for information, to know how and where to find it from a range of sources, and how to select, use it and share it with others* Educating for the 21st century

The learnings

What are they?

Information skills enable students to recognise when information is needed and to have the ability to locate, evaluate and use effectively the needed information. Information skills are pervasive in the curriculum and are reflected in the current focus on thinking skills, metacognition and research.

Why are they essential?

As information continues to expand at an unprecedented rate, together with rapid technological advancements for information storage, organisation and retrieval, there are emerging social, economic and political concerns. How Australia deals with the realities of the information age will have enormous impact on our democratic way of life and on our nation's ability to compete internationally.

Information literacy is a source of power. How students learn to handle information in each of the required areas of study is as important as the information itself. The everyday task and assignment work required of students necessitate information skills for their successful completion. They are integral to the curriculum and should never be seen as something separate that can be taught in isolation. School curriculum planning should consider the way in which information skills are introduced, practised and contextualised if students are to develop the skills necessary for purposeful enquiry, informed decision making and lifelong learning.

The learning context

What is the role of the teacher?

The skills required in learning how to transform information into knowledge, ie of posing questions, making choices, deciding on strategies for seeking answers, gathering, processing and evaluating information, are encouraged and developed by teachers in every area of the curriculum from the child's earliest days at school.

It is the teacher's responsibility to know of the resources available, to encourage enquiry in the classroom, the school and the wider community. It is essential that in planning units of study, close interaction takes place between the classroom teacher and information specialist teachers.

In their planning for a unit of study that requires students to interact with a wide range of human and materials resources, teachers need to be able to identify the skills students possess which require practice and refinement and the skills which need to be introduced and practised in order to achieve success.

The learner

What are the students doing?

Through gaining information skills and understandings, students develop the capacity to

- recognise the need for information
- define the purpose of an assignment or task
- formulate and pose questions related to the task
- use a wide range of sources of information within and beyond school
- select appropriate information
- organise information
- communicate and present information
- evaluate the extent to which the end product meets the requirements of the task and assess their own use of the information process in completing the task

Steps needed for completing research — skills and abilities that should be included in programs

DEFINING
Brainstorming
Framing questions
Formulating hypothesis
Webbing ideas to form a concept map
Classifying and grouping information
Identifying keywords associated with a topic

LOCATING
Using library tools such as catalogues, indexes and databases
Applying keywords skills to search library catalogues
Using books and a variety of sources of information
Using online databases
Generating information by surveys, observation
Using statistics
Telephoning, interviewing, writing letters
Using audiovisual sources of information

SELECTING
Skimming
Scanning
Note taking
Listening
Reading
Reflecting
Interpreting graphs, pictures, charts, tables
Classifying by sharing information
Summarising

ORGANISING
Comparing
Combining into sentences, paragraphs, drafts
Arranging into logical sequence
Categorising
Analysing
Planning

PRESENTING
Writing simple sentences, paragraphs, essays
Talking — speeches, debates, discussion, mock trial, hypothetical, role play

EVALUATION
Self assessing
Peer assessing
Reviewing
Acknowledge
Analysing task
Talking
Celebrating

SCHOOL LIBRARY ASSOCIATIONS OF SOUTH AUSTRALIA (SLASA)

ROLE STATEMENT FOR TEACHER-LIBRARIANS

Introduction

The post industrial age, now known as the Information Age, is a rapidly changing, complex, technology driven world where information is not only expanding at an unprecedented rate but is created in a myriad of forms. People are inundated by all kinds of information which they must retrieve, sort, analyse and use in a variety of situations and for many different purposes. This poses an enormous challenge for society and education in particular. It is clear that schools must transform their approaches to learning to enable students to be able to view the whole world as a potential information source throughout their lives. In the Information Age literacy takes on a new meaning.

> *"To be literate in our society has really come to mean the ability to process and comprehend information and apply it to specific tasks"* (Marshall, Brian "The Information Age and adult literacy" *Unicorn*, Vol 15, No 4, Nov 1989.)

By developing these learning and thinking skills, students will ultimately learn how to learn and will have the skills which will enable them to become independent, responsible, life long learners who are able to apply, transfer and use the skills acquired in a variety of situations. Learning how to learn is a survival skill for the Information Age.

These changes in education are reflected in:
- **National Goals of Schooling in Australia**
- **Educating for the 21st Century** : the charter for public schooling in SA which includes *Essential Skills and Understandings and Required Areas of Study*
- Education Department of SA **Three Year Plan 1991-1993.**
- **Partners in Learning** : Position paper on school library resource services in SA
- **Curriculum Digest** Education Department of SA
- **South Australian Certificate of Education** (SACE) courses
- **Attainment Levels** for curriculum planning and accountability

Resource-based learning is an ideal methodology for developing the skills which help students cope with the demands of modern society. This methodology, which integrates information skill development across the curriculum, is a means of improving the experience and outcomes of schooling for all students.

Teacher-Librarians, with their specialist knowledge of resources, have a key role to play in the development of information skills. Their knowledge and understanding of the learning process, combined with their knowledge of resources, allows them to make a unique contribution to the learning process. Their principal role is to assist students to become information literate by developing and facilitating learning and teaching strategies which will enable this to occur.

Comment

The following outline indicates the main tasks undertaken by teacher-librarians and some of the knowledge and skills required to achieve these tasks.

The Teacher-Librarian

1. **Plans** resource-based units of work in collaboration with classroom teachers to enable students to become information literate by:
   - designing and implementing learning programs which aim to teach a range of identified and appropriate information skills
   - ensuring that information skills are integrated into classroom programs and not taught in isolation. Past experiences have shown that skills taught without reference to students' immediate needs are seen as irrelevant
   - ensuring that sufficient and appropriate resources are available to enable students to complete the learning task successfully
   - acknowledging individual differences, learning styles and students' previous learning experiences in the development of learning tasks
   - employing effective questioning techniques so that essential information for developing the unit can be discussed and decided as expeditiously as possible.

   This requires:
   - knowledge of resources available within and outside the school
   - awareness of individual differences and learning styles
   - knowledge of curriculum design
   - detailed knowledge of the information process and the steps needed in sequential skill development
   - knowledge of learning and teaching strategies
   - knowledge of how skills are transferred and developed across the curriculum
   - awareness of technological developments and how these can be incorporated into classroom programs.

2. **Collaboratively teaches** the planned units of work by:
    - instructing students on research strategies
    - negotiating research plans and learning outcomes with students
    - modelling the process, ie. concept mapping, identifying key words and phrases, notetaking
    - assisting individual students or groups of students with specific learning difficulties or special needs
    - advising students on presentation techniques
    - assessing students' use of learning resources and evaluating the effectiveness of the planned units, recommending modifications for future programs.

    This requires:
    - classroom management techniques
    - student behaviour management including conflict resolution
    - negotiation skills
    - ability to match students with appropriate resources
    - knowledge of group processes, collaborative learning and cross-age tutoring
    - knowledge of assessment and evaluation procedures
    - ability to create a success oriented learning environment.

3. **Advocates and promotes resource-based learning** as a learning and teaching philosophy by:
    - working with the principal and senior staff to ensure that resource-based learning is a major focus and included on the school's three year plan
    - developing the awareness of school staff and parents of the need for students to be information literate
    - taking a leadership role to ensure resource-based learning is a schoolwide, across the curriculum approach which integrates information skills into all learning and teaching
    - inservicing staff in resource-based learning methodology individually, and/ or on a group or faculty basis
    - initiating activities which foster resource-based learning
    - participating fully in the school's program to ensure that opportunities to incorporate resource-based learning are maximised.

    This requires:
    - knowledge of learning processes including adult learning
    - overview of curriculum offered in the schools
    - knowledge of individual and group differences, learning styles and teaching strategies
    - leadership skills
    - communication skills
    - organisational skills.

4. **Provides** for resource and information service needs of teaching staff and students by:
    - developing library and information services policy and coordinating its implementation and evaluation
    - coordinating and managing the school library and information service and its staff
    - selecting appropriate materials to support curriculum
    - providing resources for individual and group differences and learning styles
    - coordinating the acquisition and organisation of resources and information services
    - keeping abreast of technological developments which facilitate access to information
    - understanding information networks and accessing information sources outside the school
    - promoting children's literature as an integral and essential aspect of children's learning.

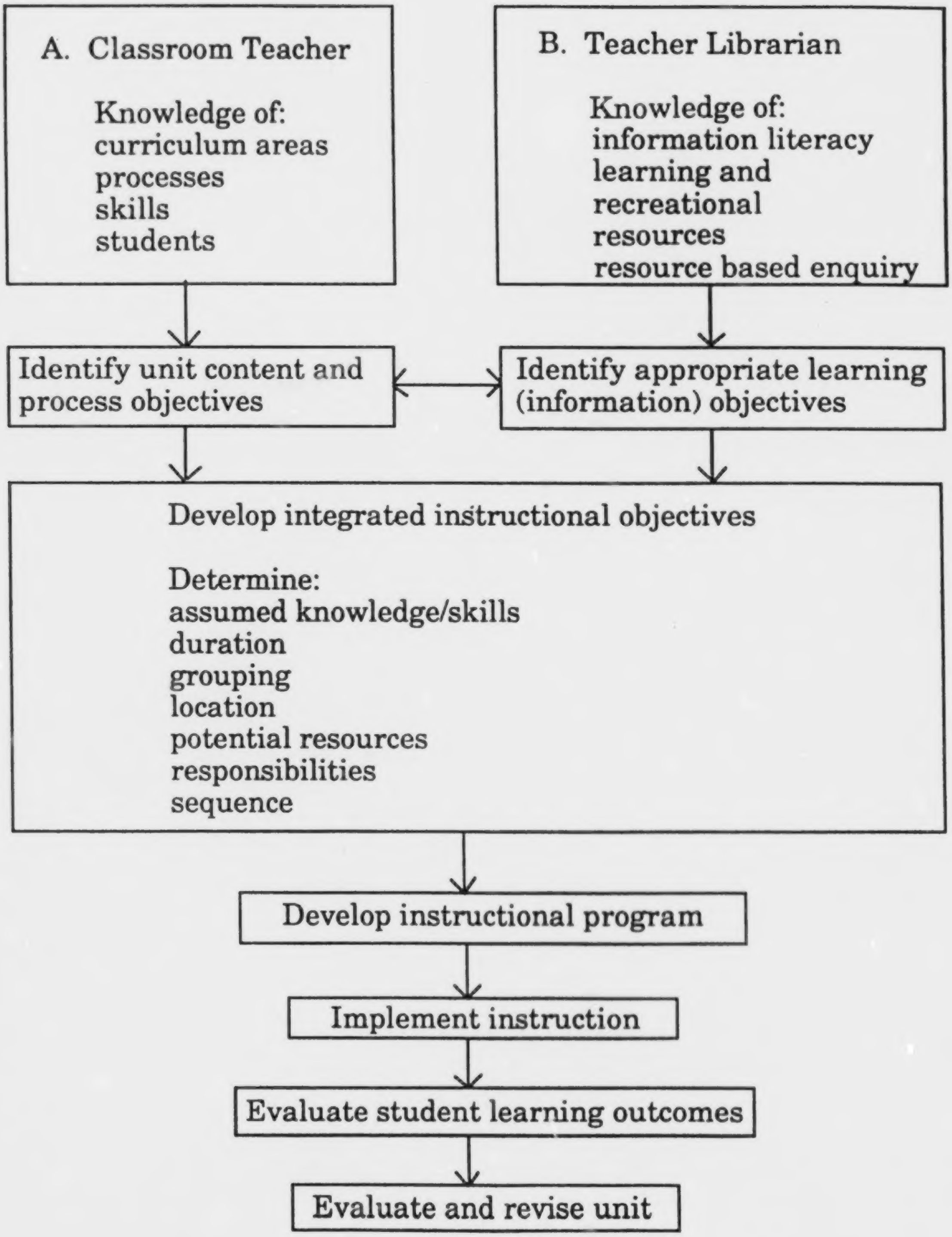
    This requires:
    - overview of curriculum studied in school
    - effective personnel management
    - effective management strategies, designed to facilitate learning, for both human and physical resources
    - consultation with other teaching staff to ascertain resource needs
    - participation in a range of training and development activities
    - up to date knowledge of children's literature

Conclusion

An individual's success in the 1990s and beyond will depend largely on his/her ability to locate, evaluate and use information. Teacher-librarians have a fundamental and powerful contribution to make in preparing students to face the challenges of the future. They have a leadership role in the school to ensure that students are given opportunities to develop information literacy and to promote resource-based learning as the methodology which facilitates this.

School Library Associations of SA (SLASA), Resource Centre Teachers Association (RCTA) - SAIT, SA School Library Association (SASLA), Australian Library and Information Association (ALIA) - Schools Section .

COOPERATIVE PLANNING AND TEACHING


A. Classroom Teacher
Knowledge of:
curriculum areas
processes
skills
students
B. Teacher Librarian
Knowledge of:
information literacy
learning and
recreational
resources
resource based enquiry
Identify unit content and process objectives
Identify appropriate learning (information) objectives
Develop integrated instructional objectives
Determine:
assumed knowledge/skills
duration
grouping
location
potential resources
responsibilities
sequence
Develop instructional program
Implement instruction
Evaluate student learning outcomes
Evaluate and revise unit

Recommendations

1 A whole school approach is adopted, where teachers, principals and teacher librarians work together in recognised planning sessions and statements, policies and procedures are developed to facilitate this movement

2 In each school, an enthusiastic teacher is recruited to support the teacher librarian to enhance confidence, credibility and school support when resource based learning is initiated

3 Teacher librarians ask teaching staff what their learning principles and goals are, then they can support teachers from the library.

4 Schools recognise the need for information literacy programs and fund appropriate training and development activities

5 School systems provide adequate support (both time and staff) for cooperative program planning and teaching information skills programs

6 A consistent terminology for information literacy is developed in Australia

References

1 Reprinted from South Australia. Education Department *Attainment levels: Introduction* Adelaide The Department 1991 p1.19-1.20

INFORMATION NEEDS OF BUSINESS — THE PROVIDER/CONSUMER PARTNERSHIP

Marilyn Harlow
Manager Research, Small Business Corporation

Jill Miller
Adult Services Librarian, Unley Library Services

Discussion was initiated by the questions

Who is your local business community?
How can you contact them?
What are they likely to respond to?

Participants were asked to consider

- *Many business owners feel isolated — stuck in their shop/workplace — would like ideas and information about their industry/trade for the purposes of comparison, generation of new ideas and motivation*
- *Many business owners feel overworked — what resources could your library offer to make their business more effective and life easier for them?*
- *Many businesses are run on such a shoe string that free, up to date information is very appealing. How effectively does business access, evaluate and use such information?*
- *The time commitment of business owners is such that waiting in queues in libraries would be a turn off. Can the information be accessed quickly?*
- *Is there a key interested person in your library who could be the local business contact person? A name to relate to and someone to take on the responsibility to seek out additional information will encourage the business owners. How effective is such a strategy?*

REACHING YOUR LOCAL BUSINESS COMMUNITY

Having business resources in your library is a great start but it must be followed through with effective promotion to ensure the right people know it is there. So...

Who is your local business community?

- business owners operating — retail shops, food outlets, wholesalers, importing/exporting agents and more
- service industries such as computing, hairdressing, or real estate
- tourism kiosks, tours, or accommodation providers
- manufacturers from industrial estates to home based operations
- transport services
- community and leisure services
- craftspeople, artists and hobbyists looking to turn their craft to profit
- farmers, flower growers, fishers and gardeners
- construction industry, decorators, designers
- TAFE and high school students studying business

- Local offices of government departments and agencies

This is just a start, there are many more.....

How can you contact them?

- DIRECTLY by door knocking or phoning using your local knowledge, council guide books or the phone book
- THROUGH community based groups such as Apex, Rotary or sporting clubs
- LETTER DROPS, LOCAL PRESS
- COMMUNITY NOTICEBOARDS
- Encourage WORD OF MOUTH recommendation from current library users

WHAT DO BUSINESS OWNERS NEED AND WANT

What are they likely to respond to?

- Many business owners feel isolated — stuck in their shop/workplace — would like ideas and information about their industry/trade for the purposes of comparison, generation of new ideas and motivation
- Many business owners feel overworked (small business operators work 60-80 hours per week on average) — what resources could your library offer to make their business more effective and life easier for them?
- Many businesses are run on such a shoe string that free up to date information is appealing
- Business owners are often so busy that they are not aware of many library products — you could make them aware of the availability of such books as the ABS Social Atlas, trade journals, business management guides
- Write ups of products or an industry for example articles in *Choice, Business review weekly* reports would be of great interest to local business in those industries
- The time commitment of business owners is such that waiting in queues in libraries would be a turnoff. Can the information be accessed quickly?
- Is there a key interested person in your library who could be the local business contact person? A name to relate to and someone to take on the responsibility to seek out additional information will encourage the business owners

Recommendations

1 Educate people to continue to be information seekers beyond their time as students

2 Promote the availability of information services to the community

3 Develop effective networks amongst information providers, so that their resources are used effectively

OPEN AND FLEXIBLE LEARNING: INFORMATION LITERACY AS A KEY COMPETENCY

Chris Harrison
Associate Director Regency College of TAFE

The workshop aimed through a series of activities to promote the participants' thinking so that they were able to

- *List the characteristics of open and flexible learning, to be able to differentiate between student and teacher centred learning*
- *Identify the skills required to participate in flexible approaches to learning delivery*
- *Identify the key competencies associated with information literacy*

Through exploring these areas participants were able to work through a series of situations to discuss and list the implications for effectively supporting learners in a flexible learning environment. The session was structured to assist those who will support these 'new age' learners — library staff, other teachers, parents and those who will work with individuals who have developed skills in lifelong learning and enquiry. Workshop materials are included at the end of the paper — work through the activities as an example of open learning in practice!

Activity 1

Think about one of your most successful learning experiences

1 What is it that you learnt?

2 What were the factors that made it a successful learning experience?

3 How did you learn? Describe some of the learning techniques that you used

Video: Watch *A way to go*[1]

Read through activity 2 first so that you are focusing on some issues.

Activity 2

What are the characteristics of open and flexible learning — are there any that attract you?

What learning and information skills did you observe the participants using — or what skills do you think these case studies assume?

Definitions — use the page from *An introduction to open learning*[2]. Consider the definitions provided (in italics).

Can you make the distinction between access ideal and the learner centred ideal. Activity 3 may assist.

Activity 3 Teacher and student centred learning

Students centredness may imply

choice of support
negotiated assessment
negotiated learning method
flexible sequence

Openness or access may imply

attendance at any time
tutors on demand
finish at any time
start at any time
study at any time open entry

Plot your experiences in the following learning situations on the attached grid Consider the intersection of the x and y axis to be the negative extreme of the characteristic eg fixed entry -- open entry.

Primary school, secondary school, university, hobby/interest learning, informal learning.

Activity 4 Information and learning skills required to support open and flexible learning

Use the handout in the conference folder *Putting general education to work* [3](see Appendix 1) and also consider the idea put forward on p18 of the provided handout from *An introduction to open learning*.

Consider also the following statement and the definition of information literacy skills which also follows

> Autonomy in learning requires that students develop the skills and abilities to enable them to find and use information for themselves. They need to be able to
>
> - determine what kind of information they need
> - locate appropriate sources, whether they are printed, electronic or people and organisations
> - develop the skills of using a wide range of resources, including increasingly large and complex electronic databases
> - be able to extract precisely the information the need for their particular purpose[4]

Information literacy is the skills to

- recognise the need for information
- identify the information sources
- locate the information
- evaluate the information
- organise the information
- use information effectively — critical thinking skills

Information literacy and critical thinking skills will develop lifelong learning skills. Agree or disagree?

Participants were asked to browse through several examples of open learning packages to identify the information skills required in order to effectively complete the module.

List the skills:

Tick those which are 'taught' within the module.

Activity 5 Implications for open learning

Consider that you are to deliver or support the module from your organisation. Describe some of the strategies that you would put into place so that students would be supported and be successful. Browse through some of the orientation modules to get some ideas.

What do you consider are the issues for open learning and information literacy that should be considered by this conference as issues for change?

Recommendations

1 Information literacy competencies must be explicitly described in terms of learning outcomes, assessment and performance in curriculum documents

2 Support structures are established and maintained, including resources, flexibility, various delivery options, organisational units (for example libraries), establishment of priorities, and cooperation between organisations

3 Information literacy staff development programs are provided for library staff, lecturers, designers and course writers

4 Models for flexible learning are designed which incorporate information literacy competencies

References

1 *A way to go* (video) Adelaide CALS 1992
2 Mitchell, John *An introduction to open learning* Rev ed Adelaide Department of Employment and TAFE 1992
3 *Putting general education to work: the key competencies report* Canberra AEC 1992 p3, 16-17
4 Kingston, Paula 1990 quoted in Harrison, C M Open all hours: the TAFE Learning Resource Centre — its roles in open learning *Conference proceedings: papers presented at the Australian Library and Information Association 1st biennial conference Perth September 30-October 5* WA Promoco Conventions v1 1990 p25-53

TWO MAIN IDEALS

Open learning is an educational philosophy based on two main ideals.

- Open learning is firstly a commitment to opening up more opportunities for people to undertake education. We will call this the **access ideal.**
- Open learning is equally about providing learning opportunities in ways which suit the individual learner. It is about giving the learner more control over the learning process. We will call this the **learner-centred ideal.**

The following definition by Lewis and Spencer (1986) neatly incorporates the two ideals

> *'Open Learning' is a term used to describe courses flexibly designed to meet individual requirements. It is often applied to provision which tries to remove barriers that prevent attendances at more traditional courses, but it also suggests a learner-centred philosophy* (p. 9).

Outcomes

Open learning courses can increase access by providing courses for learners at a

- **location** they can choose
- **time** they can choose.

An outcome of this approach is that the courses attract a range of different types of students to DETAFE.

Open learning courses can also cater for the needs and abilities of individual learners by enabling them to study

- at a **pace and in ways** they prefer
- by drawing on their **prior learning**
- using the **resources** they prefer.

An outcome of this learner-centred approach is that the learners develop more skills for learning independently.

A PHILOSOPHY NOT A MODE OF EDUCATION

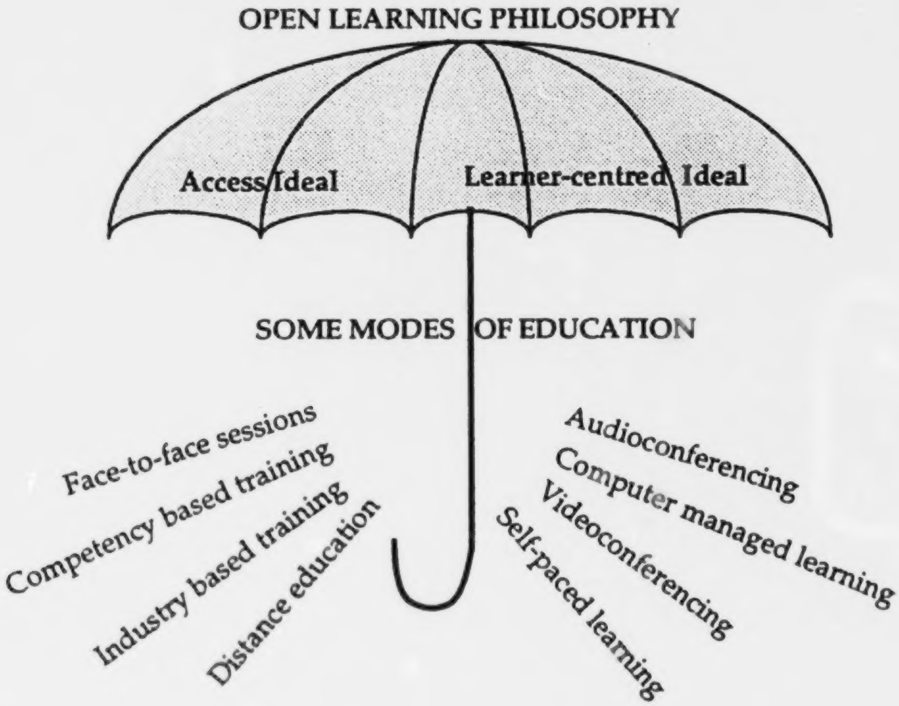
Open learning is not a specific mode or way of delivering education, it is a philosophy about how education can be provided.

Some **specific modes** of education include distance education (sometimes called correspondence or external studies), computer-aided instruction, computer managed learning, competency based education, conventional classroom delivery, videoconferencing and audioconferencing courses or combinations of the above.

Of all these different modes, distance education is the one which is often assumed to be synonymous with open learning. However, this is a misunderstanding of their relationship:

> *. . . distance learning is surely a sub-set of open learning—not synonymous with it.* ***Open learning is an umbrella term which refers to a whole series of varied educational initiatives and provision*** (Thorpe and Grugeon, 1987).

The image of open learning as an **umbrella term** is appropriate, as open learning is a philosophy which arches over a range of modes of education.


OPEN LEARNING PHILOSOPHY
Access Ideal
Learner-centred Ideal
SOME MODES OF EDUCATION
Face-to-face sessions
Competency based training
Industry based training
Distance education
Audioconferencing
Computer managed learning
Videoconferencing
Self-paced learning

Debate about definitions

There are many different definitions of open learning. For instance, in the following statement Mary Thorpe (1988) reinforces the point that open learning is not one single delivery mode:

> *Open learning is more a movement than a particular model, towards opening up education and training, particularly for those who have not traditionally participated after initial education* (pp. xii-xiv).

Whereas Thorpe uses the concept of a movement to describe open learning, we prefer the concept of a philosophy. We would like to make it clear that we are using the word philosophy in the sense of a general body of thought. We see the philosophy of open learning as a general collection of principles, ideals and concepts.

The definition of open learning has been the subject of much debate since the 1970s, and there is still no universally accepted definition. The definition we put forward in this section is the one which we prefer. If you would like to read about this debate, and find out about different definitions, we have compiled a list of references in Further Reading at the end of this section.

Perhaps you already have, or will develop, a definition of open learning which is different to ours.

Including both ideals

Have another look at Thorpe's definition of open learning as a **movement** and note that it only emphasises the access ideal of open learning.

We prefer the following definition by Lewis and Spencer (1986), which adds the learner-centred ideal to the access ideal:

> *Open learning is now defined more positively. It not only lessens constraints and removes barriers; it also actively promotes such qualities in the learner as autonomy, independence and flexibility. Open learning thus now incorporates a strong learner-centred philosophy* (p. 11).

The range of options allows students choice to suit their preferred style, and the use of well designed study guides/resource packages encourages the students to take responsibility for their own learning and develop skills for independent learning.

- Consider the following ideas of Terry Evans and Darryl Nation, in 'Dialogue in Practice, Research and Theory in Distance Education', in *Open learning*, June 1989, who argue for the centrality of the student in the learning process.

  > *It is important that students are understood as the key agents in their own learning and that both individually and collectively they can ... .shape their own learning, not just in ways they learn, but also in what they learn* (p.43).

  > *... learning is about learning to learn, getting students to manage their own learning process ... without having perpetual need of a teacher or a course* (p.45).

- We said earlier that the learner-centred ideal was harder to achieve than the access ideal in open learning courses. What are your views on this statement?

- List some DETAFE courses which emphasise access by being flexible about when or where the course is held.

FURTHER READING

If you wish to further explore general descriptions and definitions of open learning, you could read some of the following:

- Hodgson, V., Mann S., and Snell, R., (eds) 1987, *Beyond Distance Teaching Towards Open Learning,* Open University Press, Derby.
- Lewis, R. (ed) 1986, *Open Learning in Action: Guide 1,* Council for Educational Technology, London.
- Lewis R. and Spencer, D. 1986, *What is Open Learning? Guide 4,* Council for Educational Technology, London, 1986.
- Lewis R. 1986, 'What is Open Learning?', in *Open Learning,* vol. 1, no. 2, June, 1986.
- Rumble, G. 1989, " 'Open Learning', 'Distance Learning' and the Misuse of Language", in *Open Learning,* vol. 4, no. 2, June 1989.
- Thorpe, M. and Grugeon, M. 1987, *Open Learning for Adults,* Longman, Essex.

Our responses to the self-checking exercise

- The final sentence of this excerpt from Race's article suggests that he is referring to the learner-centred ideal.
- Coffey could be referring to either access or learner-centredness.
- Greenacre's examples refer to access issues.

APPENDIX 1

KEY COMPETENCIES

for effective participation in the emerging patterns of work and work organisation

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Collecting, Analysing and Organising Information

The capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it.

Communicating Ideas and Information

The capacity to communicate effectively with others using the range of spoken, written, graphic and other non-verbal means of expression.

Planning and Organising Activities

The capacity to plan and organise one's own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance.

Working with Others and in Teams

The capacity to interact effectively with other people both on a one-to-one basis and in groups, including understanding and responding to the needs of a client and working effectively as a member of a team to achieve a shared goal.

Using Mathematical Ideas and Techniques

The capacity to use mathematical ideas, such as number and space, and techniques, such as estimation and approximation, for practical purposes.

Solving Problems

The capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and the desired solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome.

Using Technology

The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.

Putting general education to work: the key competencies report Canberra AEC 1992 p3

COLLECTING, ANALYSING AND ORGANISING INFORMATION

One of the catchphrases to emerge in recent years refers to an 'information explosion'. This represents much more than a catchy cliche, for it is firmly rooted in reality. It underscores the dominance that information has across the spectrum of work and life more generally. Much of this information is contained in oral communication and it is conventional to think of information as being contained in text. But information is also presented in statistical, graphical, pictorial and tabular forms, in spreadsheets, databases, diagrams, formulae and equations, and ledgers.

Growth in the capacities to store and access information, to collect and present it in many and varied forms, and to apply to it techniques of analysis and research has led to work practices and organisational structures which now depend on these capacities. Many organisations use a structure based on a network of small units, perhaps in separate locations. This structure must be underpinned by the effective use and management of information. Further, as technology becomes more sophisticated greater proportions of the total work effort are being devoted to generating, managing and using information. Similarly, learning in further and higher education requires the ability to sift, select and present information as a critical part of the educative process.

Collecting, Analysing and Organising Information focuses on the capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it. It is based on four main ideas.

Responsiveness to purposes of the information, the nature of the sources and the audience
This involves being responsive to the nature and expectations of those who might receive the information, those who might be affected by the information and the purposes to which the information might be put. It includes the notion of social, cultural and ethical responsibility in the use and management of information. At lower levels this might mean clarifying the nature and expectations of the audience and the purpose of the information, or fulfilling responsibilities for maintaining the integrity of the information source. It might involve following guidelines on the format and protocols specific to the organisation. At higher levels it might mean reflecting upon and evaluating the processes by which information is collected, analysed and organised or identifying and using principles for the responsible use and management of information.

Application of access and retrieval techniques and principles
This can be as straightforward as accessing a library book which is known to contain the factual information sought, asking someone for directions or taking data from a graph. But it can also be more complex, perhaps drawing on the investigative skills of searching and researching.

Analysis and organisation of information
In the simplest sense, analysis and organisation of information amounts to extracting factual information and organising it into a predetermined format. In the more complex sense, the variety of theoretical approaches to some information gives rise to many different themes, categories and ways of viewing the information. This may require the creation of categories or organising structures which are unique to that information.

Evaluation of quality and validity of information
At lower levels this might mean checking that factual information is as complete as can be expected, has been correctly allocated to categories and is free of error. At higher levels it might mean establishing or clarifying criteria for judging the validity, quality and salience of information, and using those criteria judiciously.

The primary focus of Performance Level 1 is the retrieval and reporting of specific information. Performance Level 2 moves beyond this to the management of information within a broader work process. It includes the selection of management techniques and identification of relevant sources. At Performance Level 3 the emphasis broadens again to the establishment and application of principles that underpin information retrieval and organisation. It requires the capacity to create ways of organising information for new situations.

Putting general education to work the key competencies report Canberra AEC 1992 p16

BEST COPY AVAILABLE

PERFORMANCE LEVEL 1

At this level a person:

- **follows existing guidelines for the collection, analysis and organisation of information; and**
- **accesses and records information from given sources; and**
- **organises information into predetermined categories; and**
- **checks information for completeness and accuracy.**

Some applications of Collecting, Analysing and Organising Information at this level are:

- accessing routine personnel information from a computerised database;
- filing invoices using file numbers and names;
- determining tolerances from a book of technical specifications;
- updating a telephone and address index;
- determining from committee members an optimum meeting date;
- finding examples of the music of a particular composer.

PERFORMANCE LEVEL 2

At this level a person:

- **clarifies the needs of the audience and the purposes of the information; and**
- **accesses and records information from a variety of sources; and**
- **selects categories or structures by which to organise information; and**
- **assesses information for relevance, accuracy and completeness.**

Some applications of Collecting, Analysing and Organising Information at this level are:

- establishing requirements of members of a group tour;
- preparing a training plan;
- establishing an information base for selecting a child car restraint;
- establishing requirements for materials and equipment from building specifications.

PERFORMANCE LEVEL 3

At this level a person:

- **defines the needs of the audiences and the purposes of the information; and**
- **critically investigates sources to identify and distil relevant information; and**
- **identifies within information the main organising categories and structures; and**
- **evaluates the quality and validity of information.**

Some applications of Collecting, Analysing and Organising Information at this level are:

- establishing a database of decisions, agenda papers and information for a committee which meets regularly;
- using records such as profitability, consumer demand and seasonal variations to plan offerings in a cafe;
- establishing an information base of travel services in an overseas location;
- undertaking a literature search on family patterns in Australian society.

Putting general education to work: the key competencies report Canberra AEC 1992 p17

THE CONTINUUM OF INFORMATION LITERACY BETWEEN TAFE, SCHOOL AND HIGHER EDUCATION: DEVELOPMENT OF AN AGENDA

Fran Hegarty Swinburne Librarian
Bea Donkin Acting Staff Development Librarian
Rose Humphries Campus Librarian (Prahran)
Erika Dunstan Access Librarian Swinburne University of Technology

There is a national agenda for the acceptance by the postcompulsory education sectors of broadly based areas of competencies (general education outcomes) which include 'Accessing and using information (and) problem solving (analysis, critical thinking, decision making, creative thinking, skill transfer to a new context)' [1]

While Swinburne University of Technology currently operates across all sectors of post compulsory schooling, adult education, Victorian Certificate of Education, TAFE (including access), and higher education, strong links are also being forged with secondary colleges in a move to maximise articulation opportunities for students to move with credit between sectors.

As well, resources at Swinburne are being concentrated on developing learning technologies and modular courses to improve access to programs and increase options for students. The Outer Eastern College of TAFE and Swinburne University of Technology, leaders in the areas of flexible learning and multimedia resources, will cooperatively establish a learning network in the outer eastern suburbs of Melbourne.

The workshop explored, through different experiences, the possible roles librarians may play in this agenda in the development of transferable skills related to information literacy.

Information literacy skills referred to in this workshop are the skills of

- recognising the need for information
- identifying required information
- locating, evaluating, organising and using information effectively

Part 1 The changing educational environment

A brief outline of the changing educational environment illustrating the need for transferable information literacy skills, using Swinburne University of Technology as an example, presented by Fran Hegarty

Swinburne University of Technology has been at the forefront of the development and effective operation of user education programs, run in coordination with academic and teaching staff. However one of the main reasons for running this workshop is that structural changes in education are requiring a rethink of the approach to information skills development. The changes taking place in education are not unique to Australia. They include

- Educational restructuring spurred on by
  - increased retention rates in schools
  - lack of jobs
  - growing total cost of education and the need to reduce per capita costs
  - the aim of many year 12 students to enter higher education
  - the idea that a skilled workforce will revive 'the economy'
- Community expectations

It is clear that education does not currently meet community expectations.

> Secondary education is regarded as not adequately equipping students for either work or higher education; it is thought to be a major factor limiting the attainment of the goal of excellence in university standards[2]

This quote is from a very constructive report of a survey of educationalists and employers. The words 'secondary education' could just as easily read TAFE or higher education to reflect general community perceptions.

There have been many innovative responses to these imperatives for change, including the establishment of the Open Learning Agency being managed by Monash, articulation developments, and the recognition of prior learning.

To exaggerate a little I would like to put an imaginary response to this need for innovation to you from the CCPCS, the Competitive Campus of Post Compulsory Schooling. This is the type of organisation in which we may all shortly be working if we are not doing so already. It is one in which teachers, administrators and librarians will work as one for the benefit of students of all ages and stages of development.

In this environment everyone is a learner and it is difficult to tell who is who. Students will be able to plot their own course through lifelong learning through courses which blend content with the skills of learning — developing critical thinking, problem solving, group work and a full range of communication skills, through the use of a wide range of resources.

This campus will offer

- Select from a range of units at a place, pace, time and price to suit YOU
- All units give course credit towards stepped awards
- Units from the Open university, VCE, TAFE and other Universities accepted
- We recognise and give credits for YOUR relevant life and work experiences

With these concepts in place, librarians will be flat out catching up with students to conduct anything resembling a traditional user education program.

Some of the ideas I have discussed undoubtedly relate to the environments in which people in this workshop currently operate. If not now, then in the near future. In NSW for example an integrated senior high school, TAFE college and university is being set up at Coffs Harbour, on campus.[3]

The scenario painted above is not far from the reality of Swinburne, and this is causing us to rethink our ideas in the continued development of information literacy skills within Swinburne.

Swinburne is a multisectoral University, with Victorian Certificate of Education, TAFE, access and higher education courses. We are working with a number of secondary colleges to develop articulation into both TAFE and higher education award courses. As well, curricula are being redeveloped to maximise articulation opportunities for students to move with credit between the two sectors. The multicampus operation creates quite distinct community interests at each location, two inner city and one outer suburban. Students come from a diversity of cultural, national and social backgrounds ad undertake a great diversity of courses.

It is at the new campus in the outer east area of Melbourne that the need for a rethink is most obvious. Part of our brief in gaining university status is to increase the participation rate in higher education in this area. Swinburne is working in a coordinated manner with Outer Eastern College of TAFE and all secondary colleges in the area, and the Council of Adult

Education, to coordinate educational issues and reduce the barriers to student movement between the sectors.

In part this will be achieved by the sharing of information on the learning delivery technologies and associated information network services, and through the development of integrated curricula, or at least by recognition of the aims of discipline related curricula.

The aim of the discussion will be to determine ways in which we can ensure the development of transferable information literacy skills.

Part II: Four video clips illustrating the current views of users at Swinburne on their perceived information needs were shown.[4]

These videos were designed to stimulate thought on the need for change, and show

1 An academic member of staff involved with the TAFE/higher education interaction
2 Access students in a TAFE funded course.
3 Award course TAFE students — Advanced Certificate of Management
4 Award course students/higher education students — Post Graduate Diploma

Recommendations

1 Target and lobby institutional administrators and academics to raise their awareness of what the library has to offer them

2 Convince institutional administrators and academics to integrate information literacy skills into the curriculum

3 Curriculum writers need to explicitly state the information literacy skills required for the student to successfully complete the course/packages and indicate the resources available (or required) for students to 'teach themselves'

4 Bring about a change in the librarian's and the library's approach to clients so that the former are perceived as user friendly

5 Librarians and teaching staff cooperate in the development of learning packages

6 More sharing of information about development of independent literacy packages to develop literacy skills in open learning

7 Information literacy professionals recognise the prior learning of students and skills of locating and using information

References

1 *Young people's participation in post compulsory education and training. Report of the Australian Education Council Review Committee* (Finn Report) Canberra AGPS 1991 p58
2 Business/Higher Education Round Table Educating for excellence Camberwell,Vic Business/Higher Education Round Table 1992 p2
3 Learning reaches new levels at Coffs *The Australian* October 21 1992 p14
4 Inhouse videos produced by Swinburne University of Technology

THE CONTINUUM OF INFORMATION LITERACY BETWEEN TAFE, SCHOOL AND HIGHER EDUCATION: DEVELOPMENT OF AN AGENDA

Christine Jessup
Academic Adviser, Language and Learning Unit The Flinders University of South Australia

The workshop explored information literacy within the context of learners coping with tertiary education; novices in an 'expert' environment.

Questions which were posed were

- *What does it mean for a student to be, or become, information literate in a university?*
- *What expectations do academic staff, library staff and students have about their own roles, and those of others, in making sense of information?*
- *What are the implications of these expectations in relation to teaching and learning, within both the disciplines and the library, as the centres of information literacy within the academic environment?*

What does it mean for university students to be information literate?

> To be information literate, a person must be able to RECOGNISE when information is needed and have the ability to LOCATE, EVALUATE and USE effectively the needed information[1]

RECOGNISE

1 understand what you are looking for...
2 see the gaps between what you have got and what you need...

LOCATE

3 previous concepts plus...
4 know something about different sources of information and where they are located...
5 understand search mechanisms...
search programs
labelling categories
6 discriminate between sources to choose the most appropriate...
7 know how to get help and how to make the most out of it...

EVALUATE

8 previous points plus...
9 understand topic area well enough to decide on the relationship between information known through lectures and tutorials, the particular question being addressed in a specific essay or tutorial, the information found and how this information relates to the topic, and also to the field in general...

USE

10 previous points plus....
11 understand the principle of discipline based genres and develop a writing style accordingly....
12 understand how knowledge is organised so that information that has been collected can be incorporated appropriately in essays...

It was also noted that these behaviours could be viewed in a number of different ways as prerequisites or developmental skills.

Discussion points

1 *Is information literacy something we (explicitly or implicitly) expect out incoming students to have?*

Entry is dependent upon
  matriculation (Australian or international)
  mature entry
  special entry

2 *Is information literacy something students develop as they progress towards graduation?*

  informally
  formally

Finally it is suggested that depending on the view an institution may take, there are implications for either entry requirements or mainstream teaching and that it is vital for whole institutions to be developing their role in relation to ensuring information literacy is something that is part of the explicit and official curriculum and relegated to *ad hoc* remedial support. The point of these discussions is that the attainment of information literacy ought to be something that is jointly owned by teachers and learners rather than a hidden skill that becomes a barrier to success in university learning.

Recommendations

1 Teachers and librarians collaborate to achieve course goals

2 An increased emphasis in teaching methodologies which acknowledge the importance of information literacy

3 The background, learning context and needs of the student are recognised as an integral part of the information literacy process

4 Institutions recognise and assume responsibility for the processes leading to information literate students

5 Establishment of centres for teaching of learning as

- the focus for the systematic consideration of information literacy in the institutions
- to facilitate information literacy programs in the institution

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1 American Library Association Presidential Committee on Information Literacy *Final report* Chicago ALA 1989

INFORMATION LITERACY — CHANGING ROLES FOR INFORMATION PROFESSIONALS

Joyce Kirk
Associate Professor, Head: School of Information Studies University of Technology, Sydney

Ross Todd
Lecturer, School of Information Studies University of Technology Sydney

The proliferation of information in Australia and the growing disparity between the 'information rich' and the 'information poor' is a reality of the 1990s, albeit an undesirable one. The current scope and pace of change highlights a need for both formal education and continuing professional education to give attention to the needs of information users and the development of information literacy as well as knowledge and skills associated with the use of information technology.

The workshop presented some preliminary research findings which demonstrate the impact of information literacy education on self esteem, attitudes, information seeking, decision making, and the self directed learning of people. The research suggests that a marketing approach to information provision is consistent with the goals of information literacy, and demonstrates that information literacy is an empowering force for people. Key implications for education at all levels, and especially for the continuing education for information practitioners was explored.

Introduction

The proliferation of information in Australia and the growing disparity between the 'information rich' and the 'information poor' is a reality of the 1990s, albeit an undesirable one. Information itself is now recognised as a strategic resource, and presents information professionals with important challenges and opportunities. The current scope and pace of change, driven by the rapid development of new knowledge, new technologies and their social impacts, require that information professionals not only develop the flexibility to respond rapidly and creatively to new parameters, but also develop the ability to capture opportunities being created by these changes. In particular the rate of change and the expected increase in the number of functionally illiterate adults in Australia bring into sharper focus the needs of information users and the development of information literacy, including knowledge and skills associated with the use of information technology.[1]

The ALA Presidential Committee report suggests that to be information literate, a person must

> be able to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information. Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how information is organised, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand [2]

This definition of information literacy suggests that it encompasses an interlocking set of skills and a learning process, and is characterised by abilities or behaviours rather than a specific subject domain.

Further directions

The September 1991 Report of the House of Representatives Standing Committee for Long Term Strategies *Australia as an information society: the role of libraries/information networks* identifies four key factors that will impact on the role of information practitioners in the context of information literacy in the 21st century. The report asserts that

1. access to information is the basis of social justice, democratic processes and economic development, and that the key to this access is information literacy
2. information agencies are one means of inexpensively providing information literacy programs for people in the community who need to develop skills in locating, evaluation and using information effectively
3. there is a need for research into ways that information literacy can be integrated into all levels of education, including formal education, teacher education, education for the information profession, and continuing education for information practitioners
4. there is need for greater collaboration between educational institutions and cultural institutions such as libraries and museums in promoting and developing programs for information literacy

These factors suggest that information agencies in future will address the development of information literacy as an organisational goal, that information professionals will be involved in establishing information literacy needs of clients, and that they will increasingly play a role in the development, implementation and evaluation of programs for information literacy. This futures scenario begs answers to two critical questions

1. What are some of the guiding principles and assumptions that underpin the development of programs for information literacy?
2. What evidence is there that information literacy has an impact on learning?

Guiding principles for information literacy has an impact on learning?

An identification of the key principles that underpin programs for information literacy can be found in current approaches to both learning and information provision. These approaches encompass the knowledge, skills, values and attitudes that form the generally accepted perspective of a profession and serve as a foundation for study, research and practice in that profession. The following analysis of the changing paradigm of education, based on Ferguson[3] and Biggs and Telfer[4] highlights some of the key ideas about learning that should underpin programs for information literacy. (see Appendix 1 page 134)

By examining some of the underlying assumptions and principles that shape the emerging view of learning, it is possible to identify a number of guidelines that should underpin programs for information literacy, such as

- learning recognises the worth of the individual, and values the cognitive, cultural, social, affective and technical development of individuals. It is based on a consideration of the needs, interests, concerns and abilities of individuals
- learning is a dynamic and participative process of informing and transforming, with emphasis on learners knowing how to learn rather than expecting to be taught
- learning is experiential and so learners are encouraged to operate from their own domain of experience rather than moving immediately into that of the educator's experience
- effective learning is facilitated by a pluralism of methodologies that are responsive to individual learning styles. Some learn best by listening, others by seeing, others learn best in groups
- clear aims and purposes should underpin the design of learning programs; these target specific learning outcomes and enable learners to demonstrate proficiencies that are personally meaningful

- practices which contribute to an effective learning environment are those which enable learners to work at their own pace; incorporate elements that are creative and imaginative; encourage learners to be thoughtful and curious; encourage learners to try new ideas and skills; and develop appropriate interpersonal relationships
- the educator is a facilitator of student learning, guiding discovery, problem solving and the development of independent thinking. Learners are encouraged to design and make critical decisions that move an enquiry forward toward the unknown. Such learning strategies also encourage students to take more responsibility for their own learning

The principles and assumptions that are shaping current views of learning are complemented by emerging views of information provision. Following is a synthesis of key writings[5,6,7,8] that identifies the changing perspectives of information provision and provides further guidelines for the development of information literacy programs. (see Appendix 2 page 135)

This synthesis demonstrates a shift from a supplier orientation of professional information practice, with emphasis on information products and services as ends in themselves, to a user orientation where the focus is on identifying information needs of people and developing information products and services responsive to those needs. Garvey (Dervin and Nilan[9]) asserts that 'it is becoming increasingly clear that the success of information services is more likely to be achieved through adjusting the services to meet the specified needs of an individual rather than trying to adapt the individual user to match the wholesale output of an information system.' This approach is essentially a marketing approach. The philosophy of marketing says that organisations, institutions, agencies who identify customers' needs are able to more effectively develop need satisfying products and services and deliver value to customers, and usually succeed in achieving their organisational goals. A responsive, flexible practice that is outward looking, oriented towards meeting user information needs, is likely to have information literacy programs as an integral part of its service orientation, not merely tacked on as a managerial whim. Education for information literacy will be viewed as a central organisational goal.

A user oriented approach to information provision suggests that the following guidelines should underpin information literacy programs

- the focus of information literacy is people, users of information. Information literacy is relative to the individual, a particular need, and the situation of the individual
- information users construct needs out of situations; users' pictures of their situations are important. Information literacy program thus need to focus on the user's immediate context of need and use — situationality, as defined by the unique time and space of the individual that prompts the information need
- planning and development of information literacy programs will be based on needs as determined by users, not defined by the organisation; this implies a sound knowledge of the different groups of users served by the information agency — their needs, characteristics, information seeking behaviours, and gaps in knowledge and skills to utilise information effectively
- information literacy programs should aim to develop a set of knowledge and skills about information handling to provide users with the means to satisfy their own needs from whatever sources, through all available means, regardless of medium, format and presentation. There is no need for information literacy programs to be agency specific
- information literacy programs should be process oriented, rather than product oriented; as with program planning, program evaluation needs to be evaluated in terms of users' needs, and the benefits and satisfaction derived

A collaborative, active, user centred model of information practice — a marketing approach — is consistent with the goals of information literacy and central to the success of information literacy programs. Current paradigms in information provision and education share a number of components that together represent a dynamic force for excellence in the development and provision of programs for information literacy for groups of users. Naisbitt and Arbudene highlight the centrality of the individual in this process

> the most exciting breakthrough of the 21st century will occur not because of technology but because of an expanding concept of what it means to be human... The wider our horizons and the more powerful our technology, the greater we have come to value the individual[10]

Information literacy and learning

A considerable body of literature exists on the part played by information literacy in learning. Information literacy is consistently presented as a means of personal and national advancement and an essential competency for lifelong learning. For instance Huston claims that intelligent decision making is 'dependent on individuals' access to and use of accurate, comprehensive and relevant information'[11] The New South Wales Department of School Education's policy document *Information skills in schools* asserts that skills of information literacy 'assist people to satisfy their changing information needs, pursue independent lifelong learning and contribute to the development of an informed society.'[12]

There has been little testing of these assertions. Statements of the value of information literacy are largely based on intuitive recognition and anecdotal reporting rather than on systematic investigation. Available research is fragmented and piecemeal, without connection to prior research or sufficient concentration in one area to build a useful body of knowledge that can inform practice. Past research also has tended to focus on skills of locating and selecting resources in a library, or on surveys of library use, with needs for user education inferred from these. However, there is growing acceptance that the notion of information literacy encompasses more than situation specific skills of library use, library skills, reader education or bibliographic instruction. Careful consideration of the American Library Association definition suggests that information literacy is not specific to one particular type of library or information agency; rather it embraces skills, needs and processes that are specific to individuals, not institutions, such as

defining the tasks for which information is needed: what do I really want to find out and what do I need to do?

locating appropriate sources of information to meet needs: where can I find the information I need?

selecting and recording relevant information from sources: what information do I really need to have?

understanding and appreciating information from a range of sources, and being able to combine and organise it effectively for best application: how can I best use this information?

presenting the information learned in an appropriate way: how can I most effectively present this information?

evaluating the outcomes in terms of meeting needs and increases in knowledge: did I achieve my purpose and what have I learnt from this?[13]

Development of these skills provides the central area of focus for the substantive content of information literacy programs.

Does educating for information literacy make a difference? In 1992 Todd, Lamb and McNicholas[14] undertook descriptive preliminary research to test some of the assumptions about educating adolescents for information literacy in a secondary school setting. 110 students in Years 7,9 and 11 at Marist Sisters College, Wollwich NSW were involved in learning programs where information skills were purposely integrated into specific curriculum context. Planning and implementation of the program were based on the learner-user model of education and information provision identified above. Data was qualitative, based on lengthy participant observation and in depth interviewing. Written course evaluations, assignments, attitude surveys and examination scores were also used. Observations took place over a six month period, and interviews took place over a two week period toward the end of the time. The actual learning program focused on developing a range of information skills, with particular attention given to defining, selecting and evaluating processes. The ALA definition of information literacy provides a useful framework for organising the findings based on interviews with students. Consequently, the findings are grouped in terms of information skills, learning processes, and behaviours, though it is recognised that in reality the boundaries of each category overlap with the others.

Information skills

Students felt that

- *defining skills* contributed to increased confidence in knowing how to ask appropriate questions, and an improved ability to map out what is already known in order to more effectively determine what is needed to be known
- *organising skills* facilitated students' ability to manage the complexity and quantity of information confronted both within and out of the classroom
- *selecting and organising skills* gave students more confidence in managing the tasks of meeting information requirements, even though this initially seemed quite daunting
- *selecting and organising skills* helped students separate trivial from significant information, and encouraged more critical assessment of the information rather than merely 'copying it from encyclopedias'
- *collectively, information skills* provided a coherent structure to information enquiries, enabling students to focus on the immediate information task and remain true to it
- *information skills* were not location specific 'library skills' A broader view of information and use of sources beyond the school library were evident. Students saw themselves as a source of information and questioned their own knowledge before seeking information from other sources

Learning processes

Students believed that

- information skills were empowering, enabling them to make sense of and take control of their learning
- information skills encouraged responsibility for learning, and learning from mistakes
- information skills helped learning at a deeper level and gave confidence to explore the unknown
- the time taken to acquire information skills was considered worthwhile because the skills helped them to more efficiently process the information content
- information literacy was 'doing', with active participation seen as critical to successful learning
- the teacher was a 'helper', helping students to learn for themselves

Behaviours

Teachers felt that

- mastery of information skills provided a sense of achievement and satisfaction and improved self esteem
- improved short term and long term memory was evident in class tests and quizzes

- increased concentration and focus on information task contributed to active learning
- increased meaning and precision of meaning provided motivation for further learning
- learning to manipulate and arrange information contributed to selfdirected, autonomous information seeking
- there was some evidence of transfer of skills to other information problems beyonf the immediate context of the classroom and subject content
- students seemed more willing to exchange viewpoints and to initiate class discussion where meaning is discussed, negotiated and applied
- a skills approach reduced boredom and added greater vitality and interest to their classes

This study suggests that programs for the development of information literacy can bring together education and information in a dynamic way to guarantee meaningful information seeking and utilisation. Information literacy is a powerful tool that gives people the freedom and confidence to solve their information problems and take action.

Emerging trends indeed suggest that information literacy will be a central part of our professional future and the development and implementation of user centred information literacy programs will be an integral part of professional practice.

The focus of this workshop will be to examine, in the context of this data the questions

- Are information professional ready for such a calling?
- Do they have the competence and expertise to provide such bold initiatives that are based on a sound understanding of the principles of effective information provision and educational practice?

A time of introspection, of identifying gaps in the knowledge and skills possessed in order to carry out such programs is essential.

Workshop program

The workshop will provide strategies to enable participants to

- identify gaps in their own knowledge and skills that when met will enable them to make a more effective contribution to developing information literacy through the restructuring and repackaging of information
- develop strategies for applying the outcomes of this gap analysis to the development of a staff development program for their organisations
- develop their skills of neutral questioning to identify information needs

Outcomes

For participants

- An education and information framework for analysing information literacy
- A sharper understanding of the implication for professional practice of
  - the marketing approach to information provision
  - information need as a basis for the development of information services
  - information literacy as a set of knowledge, skills and atttrudes which underpin the meeting of information needs
- Techniques for analysing the role of information professionals in the development of the information literacy skills of their clients
- Enhanced strategies and techniques for conducting and evaluating information interviews with clients

For participants' organisations and workplaces

- Information professionals who are more aware of the challenges involved in implementing information literacy programs with a range of client groups
- Information professionals who have plans for their own professional development with an emphasis on information literacy and the development of appropriate information products and services
- A tentative plan for staff development in relation to information literacy
- A model and strategies which might form the basis of information literacy programs

Recommendations

1 National funding for research to provide more evidence to convince decision makers of the impact of information literacy and its programs

2 Design professional development programs on information literacy for delivery in the workplace and in preservice programs especially

3 Establishment of networks for sharing information about, and programs about information literacy ie the Who, the What, the Why and the How of information literacy programs

4 Information providers and educators recognise the need for broadbased information literacy programs that focus on the needs of their clients

5 The Australian Library and Information Association Board of Education and Library Schools consider the issue of information literacy and the implications for generalist programs of librarianship

6 Professional organisations such as ALIA incorporate information literacy sessions into their staff development programs

7 Action the Jones[15] report's recommendation that 'DEET fund a research project into ways that information literacy can be integrated into curricula at all levels of education, including teacher education'

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APPENDIX 1

LONGSTANDING VIEW OF LEARNING	EMERGING VIEW OF LEARNING
• emphasis learning content, acquiring a body of 'right information' once and for all	• emphasis on learning how to learn, how to ask questions, to be open and to evaluate new concepts, how to access information; what is 'known' may change
• learning is a product, a destination	• learning is a process; learners make decisions about their learning and are encouraged to be autonomous and independent learners
• authoritarian learning structure where conformity is rewarded and difference is discouraged	• approaches to learning are flexible and responsive to characteristics and behaviours of groups of learners
• relatively rigid structures with prescribed curriculum that emphasises 'appropriate ages' or 'levels' for learning activities	• flexibility and integration of age groupings — individual not automatically limited to certain subject matter by age or educational level
• learning relies primarily on theoretical 'abstract' book knowledge	• theoretical and abstract knowledge complemented by experiment and experience, both in and out of the classroom
• classroom designed for teaching efficiency and convenience	• learning context, and establishing an environment that encourages confidence, self reliance and responsibility are important
• often learning needs are bureaucratically determined; resistant to community input	• concern for the environment of learning that is responsive to the needs of learners; community input is encouraged
• teacher imparts content — a one way street; teaching is talking, learning is listening	• teacher is a facilitator of learning, a learner too; learning is a shared environment where candour is permitted; students and teachers see each other as people, not roles

APPENDIX 2

LONGSTANDING VIEW OF INFORMATION PROVISION	EMERGING VIEW OF INFORMATION PROVISION
• information is viewed as objective, 'bricks' of information with constant meaning	• information creates meaning and understanding, enables people to make sense of their situations; meaning varies from person to person
• agency functions as a channel between information source and user; emphasis on delivery/transfer of information -- getting information into the hands of the users	• information user is actively involved in information transfer and does something with the information to satisfy needs; emphasis on user doing something with the information
• decisions are top down — institutionally derived; emphasis on self reliance and self development of the organisation	• organisational decision strategies are based on knowledge of users
• users of information are passive recipients of information — the 'destination' of information; users are portrayed as not having much control over the agency's role of storing and channeling of information	• users are information processors and decision makers; they initiate information searches to satisfy information needs; information needs exist within users as gaps in knowing
• individuality is seen as chaotic; the same level of service is provided to all; information fits each person in exactly the same way, thus an individual's response to information conforms to expected group response	• information seeking behaviours of people vary from individual to individual; individuals are copers with their environments rather than merely reactors to whatever is initiated for them
• emphasis on provision of 'neutral' information	• people need to have access to information appropriate to their abilities, interests and needs
• libraries designed as storerooms for books; convenience of storage rather than convenience of users	• libraries are part of a vast information infrastructure to meet users' information needs
• communication tends to be of a persuasive and promotional nature attempting to convince the user to adopt an innovation	• a marketing approach to information provision is a key mechanism of communication
• passive approach to the development of services tailored to specific information needs; little feedback from users on appropriateness of resources and services	• collaborative approaches between all sectors of the information infrastructure to develop services to meet needs; feedback is essential

COURSE DESIGN AND DELIVERY: LIBRARIANS AND TEACHER LIBRARIANS WORKING WITH EDUCATORS TO MAXIMISE INFORMATION LITERACY SKILLS FOR STUDENTS

Paul Lupton
Lecturer, School of Language and Literacy Education Queensland University of Technology

The aim of the workshop was to develop a set of understandings and strategies which should facilitate the delivery of courses to integrate the skills of information literacy, so that the students acquire these skills in the context of their studies.

Objective

Participants will understand strategies for librarians and teacher librarians to become involved with the design and delivery of programs which integrate the skills of information literacy. The workshop will employ a process approach.

Principles of skill development

The principle of skill development provide a basis by which information professionals can be involved as partners in the design and delivery of programs at the school, TAFE and university level. This partnership utilises the specific knowledge and skills of librarians and teacher librarians and ensures greater and more focused use of information services by students and their teachers.

The following principles for teaching and learning skills can be applied to the acquisition for any kind of skill.

The principles of teaching and learning for skill development

1. The skill should be taught functionally, in the context of a topic of study, rather than a separate exercise
2. Learners must understand the meaning and the purpose of the skill, and have motivation for developing it
3. Learners should be carefully supervised during the first attempts to apply the skill, so that the correct habits will be formed from the beginning
4. Learners need repeated opportunities to practise the skill, with immediate evaluation as to success of failure in performance
5. Learners need individual help, through monitoring and follow up exercises, since not all students learn exactly the same rate or retain equal amounts of what they have learnt
6. Skill instruction should be presented at increasing levels of difficulty, moving from simple to more complex; the resulting growth should be cumulative as the learner moves through the course of the study, with each level of instruction building on and reinforcing what has been taught previously
7. Students should be helped, at each stage, to generalise the skills, by applying them in many varied situations; in this way, maximum transfer of learning can be achieved
8. The program of instruction should be sufficiently flexible to allow skills to be taught as they are needed by the learner; many skills should be developed concurrently[1]

Before looking at the issues this set of principles raises for us in our workplace, let us consider whether the principles describe the way we learn skills.

Consider a skill which you recently mastered. Recall the stages you went though in learning the skill. How closely do they parallel the principles?

Individual participants recorded the steps they followed in acquiring a skill, for example: tree planting; improving computer skills; using an electric drill; using AARNet; using voicemail; golf skills; textile spinning; using CDRom; and operating a video recorder

In reporting the steps followed it was apparent that there was a reason for acquiring the skills; that trial and error was normal for many; that 'experts' or manuals were consulted when required; and that practice was important in mastering the skill.

What are the issues?

- some teachers feel threatened when working with others
- the time needed initially, for example time to share philosophy
- understanding different teaching strategies
- the need for sufficient resources and equipment to do active learning
- teaching the teachers — resistance to change
- working out logical steps of teaching skills
- ensuring teachers consider the time on acquiring information skills is well spent
- roles of the various participants must be valued
- building in evaluation
- need for interpersonal skills
- remaining flexible not dogmatic
- shared understanding of roles

The major issues facing the involvement of information professionals in being part of the design and delivery of programs integrating the acquisition of the skills of information literacy were determined to be

1 There must be shared understandings of roles, responsibilities and expectations
2 The partners require sound communication and interpersonal skills
3 Time commitments for the process are required
4 Teachers may have to be convinced of the enhanced learning which can ensure and that cooperative learning is worthwhile
5 The roles of the partners must be valued
6 Time requirements must be understood
7 The process for evaluating outcomes must be included in unit planning

Is there a mandate for librarians to be involved?

The 1990 report *Library provision in higher education institutions* examined the question of the educational role of higher education libraries. This section of the report describe ways by which libraries can be involved in the delivery of the curriculum so as to integrate the skills of information literacy.[2]

Steps in planning a unit of work

The planning process which integrates the roles of library staff and teachers in the implementation of a unit will include

- Initiate contact with the teacher/lecturer to determine planning times and obtain information about the unit chosen for involvement — subject, year level, experience of students, form of assessment
- Use this basic information to prepare for the future planning session and to determine how one could be involved

- Clarify the goal and objectives of the unit — which specific objectives indicate your involvement, in what ways are the skills of information and literacy needed by the students during the unit. (Remember the skills of both the physical and intellectual access to information)
- What are the learning/information resource implications of the unit? How can these be met?
- Determine the involvement of library staff and of the library in the execution of the unit, for example in special focused small group tutorials. Book this involvement. Determine appropriate strategies for use during this involvement
- Establish the assessment criteria. How will the information literacy skills be assessed?
- Following the completion of the unit, evaluate the process and record suggestions for improvement during the next planned involvement
- Discuss the experience with colleagues and supervisor[3]

Recommendations

1 The skills of information literacy become integral to assessment; explicitly as a recognised aspect of the learning process

2 Librarians and teacher librarians think laterally about resource supply; that teachers are encouraged to consider the resources implications of assignments

3 Increased cooperation is established between teaching staff, librarians and students (the learning partners) which will lead to greater transfer of skills and confidence across disciplines

4 A shared understanding of roles, responsibilities and expectations between information professionals and educators is fostered

5 A shared understanding of issues and resourcing between information professionals and educators is fostered

6 Communication and interpersonal skills are recognised as necessary components of librarians' and teacher librarians' personal characteristics

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3 These steps were adapted from a checklist developed by Ken and Carol-Ann Haycock for their three-day workshop on cooperative program planning and teaching

MFP OR MFP — THE 2020 VISION OF INFORMATION SERVICES

Philippa Middleton
Management Consultant

Future models of information services delivery were presented for discussion in the context of the MFP's stated emphasis on knowledge based industries and 'world university' and model village concepts. The workshop explored the information needs of business people, researchers and students, and the general community, in the next three decades. The MFP planning process offers an opportunity, perhaps an imperative, for library and information services planning in Australia.

Background

The following outline of the Multifunction Polis (MFP) is largely sourced from MFP documents.[1]

MFP Australia is a national project to

1. establish and develop Australia's competitive position especially in environmental management, information technology and communication, and education
2. establish and develop a first class infrastructure for the next 20 years — telecommunications, education, research and development
3. contribute to the internationalisation of Australia's society, with an Asia Pacific focus
4. build and manage a series of urban villages on reclaimed land at Gilman (north of Adelaide) to act as models for the way we will build and manage urban areas in the future

The organisation of the MFP is entering a new phase with the appointment of a national Board of Management in late 1992 and a Chief Executive Officer to be announced early in 1993.

It is not really important to know exactly what the MFP is or what it will be as this sort of planning needs to take place in all our cities. The MFP is bringing disparate groups together, retrieving them from their sectoral and political hermitages.

Villages

While the MFP is certainly more than just the villages at Gilman, it is important to understand that the elements of the vision for these villages includes

- mixed populations of 3-5 000 people in each village
- villages must be 'of the future' in design
- housing will be connected with optical fibre communication network
- they must improve urban relationships, with people choosing to live, learn, earn, play, pray without needing to travel large distances
- they must make a positive impact on their surroundings and adjacent areas
- they must contribute to MFP objectives by acting as models, test beds and provide research opportunities

The definition of Gilman is still somewhat nebulous, but in this context it is generally applied to the suburbs adjacent to Gilman such as Port Adelaide and Taperoo.

Education Working Group

The Education Working Group is a subgroup of the MFP Management Board and its task is to specify the educational requirements for the villages. Education in the MFP must

- demonstrate that education is a lifelong activity

- provide model opportunities for the introduction of new educational technology
- contribute to the internationalisation of the community, including the economy
- demonstrate that learning will occur at home, at work, and at specialised learning centres

Peter Sandery a member of the Education Working Group has provided the advice that 'recreating the institutions of the past in new architectural form is not a strategy for a socially responsible and commercially viable education for the future. There is no other apparent solution than technology to the problem of providing a dramatic increase in educational productivity.'

Other groups

Other allied groups are the Information Utility, a South Australian government and private sector initiative to provide networked communication services and the MFP Social Issues Working Party. With the Education Working Group, all three groups have recognised the importance of library and information services in their planning. ALIA and ACLIS have formed an MFP subcommittee and one of the members forms the link to the MFP Education Working Group. In conjunction with the chairperson of the Education Working Group, Dr John Mayfield, six potential information technology projects have been identified by the ALIA/ACLIS committee. They are to

1 develop common front end software and telecommunication links to provide access to all online library catalogues in Adelaide
2 establish a statewide network of relevant CDRom databases
3 set up model home based information services
4 set up model office information systems
5 demonstrate the universal workstation
6 research the different information needs and learning modes of groups associated with the MFP

These projects are intended to emphasise working with other groups and the private sector and to recognise that libraries are one node in the information network. Much of what has been said in the plenary sessions of this conference — Rodney Cavalier's digital information versus personal networks and Philip Candy's concept of variable quality of information and the capacity of our systems to deliver what we promise — is directly relevant to this sort of information technology planning.

Workshop

Workshop participants were set the general task of thinking, imagining and discussing about the various issues the concept of the MFP has raised for them. Very strong social issues came to the fore including

who has control of information
who is going to have access to educational choices
warnings about social experimentation
we need to reflect more on issues of equity before leaping into the excitement of new technology
groups concerned with information literacy are likely to be one of the few voices of conscience in technology planning

Some form of MFP will happen — it is already happened in some ways. If the MFP has done nothing but bring together groups who would otherwise not have consulted and collaborated with each other, then it has been worthwhile. A lot more is likely to happen, perhaps more in terms of networks than physical villages and buildings but the MFP offers an excellent opportunity for cooperative planning of information services.

Recommendations

1 Extensive examination and debate of the issues of social justice and equity raised by the MFP

2 To be effective community consultation must be broadly based limiting the gap between 'information rich' and 'information poor'

3 The MFP act as a focus for emerging technology and the sharing of information

References

1 Mayfield, John *Briefing paper for the MFP Education Working Group.* Unpublished paper November 1992 and
MFP-Adelaide: linking people, environment and technology — a vision for the future Adelaide MFP Management Board 1992?
This is number one in a series of six leaflets outlining the objectives of the MFP-Adelaide. Others in the series are Business opportunities: Information technology and telecommunications: Education: Environmental management: Urban design

DECISIONS ARE ONLY AS GOOD AS THE INFORMATION THEY ARE BASED ON

Janice Nitschke Manager Library and Information Services Millicent Public Library
Carolyn Gerhardy Community Information Coordinator St Peters, Walkerville and Prospect Public Libraries
Susan Arthur Coordinator Community Information Support Service of South Australia
Ursula Hickey Reader Services and Community Information Librarian Burnside Public Library

A panel approach was taken for this workshop with the theme 'Information literacy — accessing community information', in which participants discussed

- *The strategies that they can take to increase an awareness of community information in the community; increase information literacy in the community*
- *The use of technology in an appropriate way so that people can access information in a number of ways: increasing information literacy through the use of technology*
- *Practical examples of how to establish a community information centre and make it accessible to all — information rich and information poor*

In a world increasingly dependant upon knowledge and the ability to acquire it, the problem of those with limited access to, or the ability to access this information, will only be exacerbated. We must have the tools and the ability to enable all the community to access this global wealth. We must act now and serve our communities, we must be aware of their needs and act accordingly to enable them to become informed.

The workshop took the form of three papers
Why community information and the development of community information services
Establishing a community information service, using the City of Burnside Library as a case study
Using technology to access community information

COMMUNITY INFORMATION SERVICES

Background

In the 1960s and 1970s the substantial population growth in Australia resulted in urban sprawl and the growth of outlying suburbs and lack of infrastructure to support these, such as transport. People became much more mobile than in the past resulting in the diminuition of the role of the traditional family and neighbourhood supports in people's lives. People's traditional information networks have broken down; small family units have become the norm; family members very often live long distances away. Traditional community gatekeepers of information such as the postmaster or postmistress, the family doctor or the corner shopkeeper are now very often either nonexistent or are strangers.

The information explosion and the increasing complexity, specialisation and number of organisations also affects people's access to information. Three levels of government, a complex array of laws and accompanying rights and entitlements, and an enormous number of agencies, services and structures set up to meet information needs add to this complexity.

Information is required for
income security and economic opportunity

- health
- basic material needs — food, clothing, shelter
- education and training
- environmental quality
- individual and collective safety
- social functioning
  - individual, family and group support
  - recreation
  - cultural and spiritual enrichment
- citizen participation in social organisation
  - social action groups
  - volunteering
  - political organisations

Many people have difficulty in accessing the information they need. In many cases they are not aware that there are services to assist them — community services or information services. They are not even aware that they are missing out and that it would improve the quality of their lives to be better informed. Reaching out to these people is one of the big challenges for community information providers.

Community information needs are met through services provided or functions performed by all levels of government as well as nongovernment organisations, religious institutions, private enterprise and individuals (family, neighbours, personal networks)

People, either as individuals in their everyday lives or as a community, need to have knowledge that will allow them to take effective action to improve the quality of their lives or their personal well being. They need to have control control over their environment and the community needs to function well. Information is the key ingredient.

Development of Community Information services

Community information services developed as a response to changes in society and they provide the signposts within a community to enable its members to find their way.

The first formal community information services were established as Citizen's Advice Bureaux in Britain during the Second World War an dealt with the range of problems of the time — ration cards, evacuation and emergency procedures etc.

Today community information services are involved in

- linking a person or group who has an unmet need or problem to an organisation, service or another person or activity which will help meet that need or problem
- supplying directly information about rights in a particular situation or straightforward facts

Community information services are located in a variety of places. These may be the local council offices, public libraries, community or neighbourhood centres, federal or state government centres or in stand alone situations. Specialist information services also exist which serve a community of interest rather than meeting general needs. Examples of these in South Australia are the Women's Information Switchboard, the Disability Information and Resource Centre or government specialist services such as the Ethnic Information Service and the Rural Women's Information Service.

Community information and community services

Many community service organisations or workers, such as community health centres, counselling services, general practitioners, members of parliament, government departments, school counsellors or aged care workers are involved in providing information to their clients as part of the service they offer. Community information services supplement these information providers assisting people with up to date information in printed, electronic or verbal forms.

It is important to remember that community information, like the community itself, is volatile. It is constantly changing with the establishment of new agencies, new projects beginning and ending, changing focus as the community changes and different issues need to be addressed by the community.

ESTABLISHING A COMMUNITY INFORMATION SERVICE

The Information Place at the City of Burnside Library was opened on 1 July 1992 and has received a 'Centre of Excellence' award. Planning for the community information area began approximately four months before the opening.

Research

What the community wanted and needed, what space and time the library could provide were the first considerations. Market research reports based on the Burnside, Kensington and Norwood Council areas and predicted trends of the council areas, with Australian Bureau of Statistics reports and predicted trends for the council areas for the next twenty years were consulted. The result was information about what age groups were most prominent, what type of work residents of the area were employed in and how many multicultural groups resided in the areas. from this information we were able to gauge what should be provided through the Information Place, in the form of pamphlets, handouts, directories etc. Unfortunately we were not able to conduct either a survey or questionnaire or consult with the public directly, which should be done if possible.

Location

The Information Place is very compact and is located near the circulation desk and exit doors of the Library. It is an open space and includes some plants, lounge chairs and a coffee table. There is also a cafe bar providing free tea and coffee and a television set for those special community events such as the Grand Prix and the Melbourne Cup!

Signage is an important consideration when establishing a community information centre. The area itself has a large sign above it, but more importantly, there are referral signs throughout the library, particularly where resources have been moved from the general collection to the community information area. The front foyer of the library holds all the information dealing with the Arts and Culture. As most of this information comes in the form of posters, it provides a colourful entrance to the library as well as referring people to the Information Place for further information.

Materials

Within the Information Place all material is freely accessible. All handout pamphlets and brochures are free but there are also items which cannot be taken or borrowed and these may be photocopied for a small fee. This enables the essential information is **always** available for the public. All information is clearly labelled in large print on the shelves, with diagrammatic signage soon to be installed.

Promotion

One of the biggest tasks with the Information Place is to get ourselves known. It is important to be able to visit youth centres, church groups, local service groups and craft groups within the area and to find out what **their** needs are, as well as let them know what you can do for them. Of course, this is often easier said than done but ideally it is what we would like to do. Articles in the local newspaper, the Messenger Press, being invited as a guest speaker at local groups and the publication of regular articles within the library newsletter promotes avenues to promote the service.

As with most local government based community information services Burnside provides a community information directory which is readily available. This is a listing of all community organisations, service groups and clubs within the local area. This is updated regularly and also provided in electronic format. This database will be available through the library catalogue. By inputting an organisation name, information — contact names, phone numbers, opening hours and services — will be presented on the screen. Staff within the council will also be able to access this information from any terminal throughout the council offices. To make access to this information even easier, we hope that in the future terminals will also be available in shopping centres, youth centres and aged care centres. People are also able to telephone the library and the relevant information can be printed out and sent directly to them.

Conclusion

This has been a basic overview of the steps to follow in establishing a community information service. Feedback so far has been very positive with an ever increasing number of phone calls and enquiries. In particular, the council offices have noticed an increase in the community information queries. If a successful information service is to be readily available to all people back up staff and volunteers are required; particularly if you want to be out spreading the word and finding out what people really need and want. If the information 'rich' and 'poor' are to be able to make informed decisions then we, as information providers, need to be able to give then the time and expertise in order for them to achieve this.

Access to information is a right.

USING INFORMATION TECHNOLOGY TO ACCESS COMMUNITY INFORMATION

People today talk about information technology as if it is a new concept, something that has been dreamt up to cope with the trials of the information age or the information revolution. But people have been using technology since some bright spark invented the wheel, and since then there have been various high points such as the invention of the printing press, the steam engine and today, the personal computer.

Certainly the needs of individuals and communities for information is not new. There is a necessity for access to information, there are strategies for providing information which have changed over the years.

It seems that by combining effective strategies for information provision with technological tools, we can help meet the information needs of individuals and groups in our communities. The key is to provide information using technology in an appropriate way — that is, in a way that enhances the ability of individuals to recognise their information needs and then provides then with the skills to find, evaluate and use the needed information. In other words, to be information literate.

What I want to outline is a specific project which took place over three years in South Australia. The project, known as the Community Information Technology Project, aimed to enhance access to information for service providers and members of the public, using information technology as a focus.

The responsibility for the provision of community information in South Australia is a shared responsibility between the state and local governments. Services therefore occurs at two levels

- **State level services**
  Information services are provided by a number of government departments, including the Department of Agriculture and the Department of Mines and Energy. Various other sources of government information are the State Information Centre (access to state government publications and general information about state government); the Disability Information and Resource Centre is funded to provide assistance to people with disabilities; the Women's Information Switchboard provides and information an referral service for women; CISSsa (Community Information Support Service of South Australia) provides support to the general community services sector as well as information services and centres

- **Local level services**
  Community information is provided through information officers based in local councils and through staff at public libraries.

Community Information Technology Project

In December 1989, the South Australian State Government, through its social justice strategy, made a firm commitment to information provision. Funding was made available over a three year period to enable CISSsa, the South Australian Council of Social Services, The State Library of South Australia and the Department for the Arts and Cultural Heritage to work together on a series of ventures that would enhance equitable access to community information across the State. This project was to have an information technology focus. The three major strands were

- the development of a computerised database of community services information which could be made available through the state's public library system and which would also be available to other community service providers who deal with the public in areas such as welfare, health, education and accommodation

- the establishment of a reference point for community service organisations seeking advice or training on information technology and the introduction of computers to their organisations. This was perceived as a growing need within the sector

- the provision of training, support and resources to the public libraries network to help them to maximise the new community information technology provided by CISSsa and to play a key information role in their local communities.

Achievements of the Community Information Technology Project

The 1991/2 financial year was the final year of funding for the Project which has achieved its objectives

- *CISSsa Infosearch.* The computerised database of community services information has been completed and is available as a stand alone database, designed for use on IBM compatible personal computers. It is available in public libraries throughout the State and may be accessed by members of the public individually or through the library staff. The database has also been purchased by a wide variety of community service organisations, including health centres, rehabilitation services, church organisations, local community information services, government departments and general support services. The database is updated regularly and provides current information about community services.

  Users can tailor the database to their particular needs by adding their own specialist or local information into the database. It is this sort of feature that particularly illustrates how technology can be used to enhance access to community information. An example of this is the Women's Information Switchboard which has added its own specialist information to the database and networked five computers for use by its volunteers twelve hours a day, seven days a week. The volunteers and staff now have access to a wide ranging information at the touch of a button!

- *Training programs*. These programs were conducted by CISSsa over the three year period of the project and are now continuing on a self funding basis. They meet an established need within the community services sector and participants come from a wide variety of nongovernment organisations including shelters, community centres, childcare centres, counselling services and health agencies. Workshops are also provided for community workers already comfortable using technology and cover topics such as design and use of databases, accessing shareware and public domain software and using bulletin boards.

  CISSsa also provides practical assistance to agencies seeking to purchase computers or who need assistance in the design and implementation of customised databases such as mailing lists or statistical databases. Current projects are the client contact statistics database for the Aboriginal Legal Rights Movement and a mailing list database for the Adelaide Central Mission.

- *Support and training for public libraries*. Staff at the State Library of South Australia have provided support and training to public libraries in the provision of community information, with a particular focus on using *CISSsa Infosearch* as a major tool. As well as ensuring staff are generally competent in the use of the database, this has lead to some very innovative developments. In a number of areas libraries have formed an information region where one library has taken responsibility for gathering local community services information for *Infosearch*. This information is then distributed to other libraries in the region and loaded onto their copies of the database and updated regularly. The result is that people using *Infosearch* in these areas can access statewide, regional and local information from the one database. Examples of this cooperation are St Peters, Walkerville and Prospect libraries and rural areas such as the Riverland, Victor Harbor and Goolwa, and Coomandook, Meningie and Tailem Bend.

Future directions

Although the Community Information Technology Project is now completed, the work started during the project will continue

- *CISSsa Infosearch* will continue to be developed in response to user needs. Developments planned for 1993 include the addition of a local directory module to allow users to produce printed local directories easily. The addition to *Infosearch* of the first external database covering services for young people will also be released in 1993

- the technology consultancy service and training courses will continue to be offered with the ability to alter training courses or design new ones as the need arises. The Common Ground project based at the Disability Information and Resource Centre will be launched early in 1993 and will provide a forum for bulletin board conferences and communication for people with disabilities

- The Libraries Board of South Australia has made a commitment to ensure that public libraries across the State will continue to have access to CISSsa Infosearch updates, future additional databases and any further development until the end of the 1994/5 financial year. This will ensure at least one access point in each local council area for up to date community services information will be available and supports the commitments of public libraries to the provision of information

Conclusion

It is important to emphasise that South Australia is the only State where government has been willing to make a strong commitment to community information provision and to information technology through the Community Information Technology Project. The project has been successful, not just because of the level of funding, but also because of the enthusiasm by workers to ensure the project's success. It is easy to be caught up in technology and see it as **the** solution to all of society's problems; but it remains a tool, just as printed directories and networks are tools. It remains the responsibility of **people** to ensure that the tools are used to enhance equitable access to information

Recommendations

1 Recognise the existence of the 'information poor' within the community, and develop particular strategies for specific groups

2 Promote wider cooperation between Public Libraries and Community Information networks to enhance access to all information for the community

3 Supplement technology use by providing access points in key areas of the community

4 Provide mechanisms for community members to input information **to** the information networks

ESTABLISHING THE AGENDA FOR CHANGE

Richard Owen

Chair South Australian Forum for Information Literacy

This session was designed to discuss the outcomes and recommendations of the workshops from the first two days of this conference. Comments were sought from the audience throughout the presentation and are incorporated into this paper.

The Program Committee and key speakers met last night immediately after the workshops were over to organise the recommendations that came out of the workshops in some sort of order. The recommendations have been grouped into themes to make them a little easier to consult today, and copies have been distributed. Over 70 recommendations from the 24 workshops — quite a formidable list to absorb and think about in the short time that we have available. (*The thematic list of recommendations is included on pages 166 to 173; the specific recommendations from each workshop are listed at the end of each workshop paper — Editor)*

What I would like to do this morning, is to start by using just a couple of quotes to raise some issues, right at the beginning, that will sensitise us to the task and the mission that we have. Then I would like to focus a little bit on what the conference was designed to do and look in a little more detail at some of the themes that have come out of the workshops — the recommendations made from the workshops — and give you a chance to make some comments about that.

> Now as a country we lived very comfortably for the first 150 years of our history, 'off the sheeps back', or what we could grow on top of the ground, or what we could dig out of the ground. We were a wealthy nation and for a wealthy nation we did not have to be a clever nation because we could buy what we wanted overseas. We did not have to make it ourselves, we did not have to compete in the export of value added goods and services. Now we do. That nature of the world in which live is changing in a way in which we have to change ourselves ... or we will become the 'banana republic'[1]

These words have been used in a variety of contexts but I think it is particularly pertinent to this conference. This for me sums up the biggest problem that we have — how do we translate what we believe needs to be done into reality.

> As we enter the 1990s that ideal of the self propelled adult, the individual who has learned how to learn, is if anything much more firmly established in educational thinking. There is a greater readiness to consider encouraging students to become selfreliant learners, able to take responsibility to a significant extent for their own learning and development, but almost two decades on, however, are we better able to suggest how it can be made a reality.[2]

I think it is obvious from comments that people have made during this conference that the biggest issue we do face is how we make it a reality.

> Accept that you may at times be unpopular. It is foolish to count people's poor opinion but if you have strong views and engaged in a struggle for sparse resources, or for changes in policy you may find yourself a controversial figure at times. There is no need to seek martyrdom but you should comfort yourself with the thought that sometimes good and worthy ideas are initially poorly received. If you want to do things to bring about changes, then you may engender conflict which can effect people's view about you, for a time and make you feel uncomfortable and unpopular[3]

and

> It is no use an individual or group of lower hierarchial status having ambitions for change if they don't understand the total hierarchy clearly enough to identify those ambitions. They may need to enlist the help of other individuals or groups, of similar status, who will be supportive and possibly create a pressure group having strength in numbers. It is not enough to know that the various power blocks exist. They need to be analysed to find points of entry[4]

And I make no pretence for the nature of the sorts of changes that are implicit in what we have been talking about over the last two days.

> The problem for me is this, whether the sleeping giant can be prodded into powerful action is unfortunately still debateable but the days of hibernation are well and truly over and extinction may well follow, despite the propitiousness of the hour[4]

That was a comment in an article from the 1991 Subject Librarians Conference, also conducted by the University of South Australia Library, and it was referring to librarians.

This conference has been designed to be deliberately cross sectoral. By the end of yesterday, it was good to hear how people were learning from each other. The value of bringing people together from right across education with a sprinkling of people from the public library sector and from outside of librarianship in education, as well. But the focus has been very much on getting people together who have similar concerns. Getting people together, particularly from the area of education and librarianship, so we are aware of what the issues are, so that we're convinced about the directions that we need to go in. This conference is a landmark, bringing people together, particularly people from libraries to talk about education. It may well be for the first time. The potential for us to provide leadership is there, but people who work in libraries are not traditionally leaders.

I would like to now focus on some of the themes that have come from the recommendations. The committee in considering the recommendations recognised that there were a number of themes that were pre eminent.

We recognise that a lot of extra time is going to need to be spent to work through the process that will be needed to refine the recommendations and to put them into a framework that will lead to action. That is the aim of the conference. Your suggestions and comments will be valued in that context.

I have chosen some examples of these themes and whilst we recognise that conference participants have only had the chance to attend three workshops (and there were 24 workshops) it may be just good to dip into some of the outcomes so that there is some feeling for the sorts of responses and concerns that people had in coming up with recommendations for each of the workshops.

Staff development
One of the major themes is that of staff development. Some examples in this area are

26 For all library staff
- commitment to information literacy commitment is written into all staff position descriptions and staff development
- provide evidence of understanding and commitment to working with users to facilitate their individual and collective access to and use of information (Cram)

38 As teacher education is lifelong, not just three to four year program, employers of teachers must be influenced to facilitate inservice education, particularly for teachers who were not themselves educated in the context of information literacy (Adey)

41 Provide inservice training in information literacy for current teacher educators (Adey)

47 Schools recognise the need for information literacy programs and fund appropriate training and development activities (Gapper)

52 Information literacy staff development programs are provided for library staff, lecturers, course designers and writers (Harrison)

Comments

Employers of teachers needing to actively support inservice education and particularly to understand the important need for time and resources to be made available for that in the context of information literacy. This comment is interesting in in another context. I heard the issue of curriculum development described by Queensland TAFE as 'curriculum development by Australia Post' (and that is not an issue that is unique to Queensland TAFE) but it indicates a problem that people don't understand the nature of change, and particularly in the area of change to educational processes. I believe we are talking about upending education and we need to understand the size and complexity and nature of that change — and the time and support that people are going to need to change.

We talked a lot in Kym Adey's workshop about modelling. Why cannot the teacher education faculties model these things, so that the rest of the tertiary institutions of which they are apart, can see what they are talking about?

Preservice training

The second theme is that of Preservice Training. There is an obvious recommendation

> The Australian Library and Information Association Board of Education and library schools consider the issue of information literacy and the implications for generalist programs of librarianship (Kirk)

Research

The third theme that came through was the need for research.

> National funding for research to provide more evidence to convince decision makers of the inpact of information literacy and its programs (Kirk)
>
> Action the recommendation of the Jones report that 'DEET fund a research project into ways that information literacy can be integrated into curricula at all levels of education, including teacher education'[5](Kirk)
>
> That the Australian Council for Libraries and Information services sponsor a project to simplify and unify library terminology (Cram)
>
> Commision research into current practices by which academic staff keep up to date (Adey)
>
> Investigate how information use is dealt with as part of best practice and benchmarking within companies (Cother)

Comments

Librarianship is an area that has supported other people in their research but done little for themselves and we need to be taking the lead in this area. The proposal for ACLIS is an interesting one — a case of never building the barriers that we then need to educate our clients to overcome! while the research into the currency of the knowledge of academic staff might be revealing.

Partnerships and Networks

Throughout emerges the need for librarians, educators and business people to establish partnerships and networks to be able to do things better, to learn from one another, to share information and experiences.

> Research to establish how workplace education programs can be effectively resourced, including establishing standrads for workplace eductaion centres, and the provision of better access to libraries by participants in literacy programs (Carruthers)
>
> Establishment of networks for sharing information about, and programs about information literacy ie the Who, the What, the Why and the How of Information Literacy programs (Kirk)
>
> Increased cooperation between teaching staff, librarians and students (the learning partners) which will lead to greater transfer of skills and confidence across disciplines (Lupton)
>
> Alliances are established with nonlibrary administrators, city and religious leaders and educators and linked to the library's marketing and strategic plans (Cram)
>
> Teachers and librarians collaborate to achieve academic course goals (Jessup)
>
> Develop effective networks amongst information providers, so that their resources are effectively used (Harlow)

Comments

There are other recommendations in this area. An area which would seem to be the focus for a national information literacy forum.

Social Justice

> Recognise the existence of the 'information poor' within the community, and develop particular strategies for specific groups (Nitschke)
>
> Extensive examination and debate of the issues of social justice and equity raised by the Multifunction polis (Middleton)

Economic Development

Both of these recommendations are particularly important in this time of economic rationalism.

> Influence the education system to encourage investigative learning and critical analysis (Gaebler)
>
> Investigate how information use is dealt with as part of best practices and benchmarking within companies (Cother)

Advocacy

Target and lobby institutional administrators and academics to raise their awarness of what the library has to offer them (Hegarty)

National, state and local campaigns to implement national guidelines for resourcing TAFE libraries (Floyd)

Comments

The last example was in the context of TAFE, to implement guidelines to improve the resourcing levels for TAFE libraries and learning resource centres but one it applies across all sectors.

Conclusion

Undoubtedly with all of those themes there are other recommendations that can be added. One of the outcomes of the conference will be that you will go away from here identifying a number of things that you can do within your own organisations. I suppose like the Green Movement, 'to think globally and act locally' is important. We have identified actions that we will take as a group, as well as commitments from you to take individually in the context in which you work.

We would like you to consider these suggestions

How we go now with what is the outcome of this conference in terms of the recommendations, how we now use this, how we put it into a framework, how we get action on it, because it is going to be important for as many of you as possible, to continue the discussion about the outcomes of the conference.

One of the vehicles that we see being used to help is the newsletter for the South Australian Forum, but I think quite obviously it would need to be much more than that as well. At the moment our intention with the next issue of that newsletter would be to write up the conference, to look at some of the recommendations, to provide you with information about how we might go about some of these things, but that is not really the conference committee's responsibility, it is all of ours, and so we need to look at what might be the best strategies for maintaining contact with each other about what has happened here, building on that, so that the ownership for the outcomes of the conference are spread far and wide.

One of the suggestions that was made in discussions amongst the conference planning committee and the South Australian Forum was that those of you are commited to doing something about that, and I would hope that is the whole audience, to become corresponding members with the South Australian Forum. This will create an opportunity to identify the frameworks, the actions, the groups who will be targetted.

There will also be much wider issues

- it might be the development of materials that will help across the country in implementing some of these recommendations
- it might be looking at things like cross-sectoral staff development programs
- it might be good practice for implementing information literacy programs

It may be any number of things, but I would be interested in comments from you about that idea of maintaining that contact. We should be able to see in three years time the impact of this conference. What has happened as a consequence of these discussions, the debate, the recommendations, because we are not here to just talk, we want to see things changed, we believe that the future of our country is involved in this as well as our own quality of life.

Would you like to respond to that?

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WHAT CAN WE LEARN FROM THE US EXPERIENCE?

Patricia Senn Breivik

I want to start this session with a number of myths — things that in the past tended to and continue sometimes to interfere with our moving ahead, with our national agenda for Information Literacy. These are USA myths, they may not be yours.

Myth number one *We cannot do it until we know more*

There are two aspects to this myth

- all of us, by human nature, and some more than others, tend to be nervous about change and want as much security as possible before moving ahead. It is also part of being a librarian and/or a professor. We want to know everything before we finish a paper or before we go forward. But no one can know everything about anything.

- there were a couple of comments made in the earlier session to the effect, 'We have to find out what people's information literacy needs really are, otherwise we will just be selling our thing.' Be honest. Do we not know enough already? Think of the national reports, think of the known concerns in our schools, our universities or our communities. Is it not already clear what most of the information literacy related needs are? Do we really want to spend several years doing a national needs survey? Are not the needs in the nation so pressing that, if we have something to offer that clearly relates to articulated needs, we must start moving forward now?

In like fashion, every librarian and faculty member I know, wants to know more about how 'to do' information literacy. The book I am currently writing, geared at elementary school principals, includes many case studies which will document how in particular situations with teachers and teacher librarians particular learning units were taught. Ultimately every information literacy and resource based learning effort must be individualised to particular situations. There is only so much we can learn from case studies, much less from theoretical lectures.

Continue your staff development efforts, but how much more do we need to know before beginning systematically to encourage curriculum restructuring? So the first *myth* in America — and maybe here in Australia — is that we cannot 'do' information literacy until we know more.

Myth number two *We cannot do it without more resources and/or more staff*

The truth of the matter is that more resource based learning can be part of any learning situation, if we just change the teaching/learning process.

I want to share with you one story of one woman who is a teacher librarian in New Hampshire. At one time she worked half time as a teacher librarian at an elementary school and half time at a middle school (which is 6th, 7th and 8th grades). Her total budget at each of those schools was $2000 and she had no support staff. That woman in a relatively short period of time was chosen as the New Hampshire Teacher of the Year. To my knowledge she is the only librarian who has ever won such an award. We asked her how she had done it.

'Well', she said, 'I decided that I had to start doing what it was that *they* needed to do and then let *them* realise what *they* really wanted and needed'.

And how did she spend her time? 'Working with the teachers, not putting books on shelves. After a while the teachers liked it and really understood why that was necessary. *Then* the resources started coming to the library.'

After each unit that she worked on with the teachers she conducted an evaluation. Questions were asked such as 'If we did this unit again, what would have made it better?' The teachers had ideas for the resources they wanted. The principals then had to start putting more money into learning resources because the teachers were demanding them.

Redirecting funds to the library for resources instead of purchasing relatively unused resources such as basal readers became the schools' priorities. It is most likely that neither of these principals would have reached these conclusions if they had not been able to see the differences for students' learning being made by resource based learning methods.

I once heard a college professor in a meeting suggest 'I wonder what would happen if we were to ask our students not to buy any more textbooks, but charged them the same amount and then put that money into library resources?' Will that happen on that campus? I am not sure. But the point is when teachers, principals, college presidents or deans begin to see the difference resource based learning can make in the performance of their students, their priorities start changing.

Priorities

In the same fashion, what are your priorities? We have already agreed that you do not have any extra time. So what are you going to stop doing so that you can become more involved in information literacy programs? There are some academic librarians who still believe, for example, that they must do perfect cataloguing — perfect meaning the way they have always done it. In their library they must have perfect continuity with something that perhaps did not make very much sense forty years ago anyway. Can we afford that today? Is that more important than students being prepared for lifelong learning?

Evaluate how your time really should be spent. It is nice to provide story hours for children. It is fun. But is that the best use of your time? You need to take a hard look at yourself, see where you are spending your time and decide that you are going to stop doing some good things in order to be able to do something more important.

Besides reallocating *your* time, there is also a need for more creative use of all staff. For example, one of the things we are learning more and more in education is the value of peer tutoring. When fourth grade children learn a skill, you want them to really know and master it. Why not let them teach younger children the same thing as part of their learning process? Why do *you* have to check books in and out? Why do *you* have to do the story hour? Can you get volunteers? Can you use slightly older children? What are *your* alternatives?

Must there be a professional librarian at the reference desk? At Johns Hopkins University the new library director was concerned about the quality of time librarians were investing at the reference desk. *The librarians* believed they had to do this because it was the professional thing to do. A survey of the reference questions the librarians were being asked was conducted. When the librarians saw the results of the survey, they decided one did not need to be a librarian to answer most of the questions. Changes were made and *now* there is more time for the librarians to perform other duties that really do require a professional.

Cleveland State University which is very concerned with minority student recruitment and retention has a program that takes students who have a certain grade average after the second year in college, and trains them as paralibrarians. They then work at the reference desk. Besides freeing the time of the professional librarians, there are many other beneficial outcomes from this staffing approach. For example minority students will use the library more and the program is likely to bring more minority students into the profession. Students who are too afraid to ask a librarian something before are able to direct their questions to their peers and are learning now. Of course there have to be safeguards. The paraprofessionals have to know when to pass the questions onto a librarian.

If you think librarians really have something to contribute to the improvement of education and the economic well being of the country, what are you willing to put aside, no matter how intrinsically good it is, to have the time to invest in information literacy efforts?

Myth number three *I must first have respect from... or Unless 'they' believe and know that I am important, that I am an equal partner with 'them', I cannot do it*

If you really believe in what you have to offer, what do you care what 'they' think? Find somebody who is willing to work with you and start there. Sometimes I hear downhearted librarians saying, 'Oh Professor So and So he will never work with me or change his assignments.' So what...! Forget that professor. Go with 'Professor Yes' who really cares about students and is willing to gamble and try something new with you. Find someone who is not on an ego trip, but who cares about what they are there to do. For most of us that is how students learn. Work with that person and when the successes happen, let that person go out and sing your praises. That is the more attractive way. Teachers and faculty will always listen to a peer more than anyone else. All you have to do is start with one person.

It is, of course, always hard to be a prophet in your own country. I have to go slower on my own campus than anywhere else. If you are an outside expert, if you come from more than 200 miles away, clearly you know more than anybody there. When you come halfway round the world...!

The self image problem of librarians has been referred to at this conference and certainly is an issue. In the United States time after time we have said, 'Why don't people, teachers, principals and/or writers of national reports realise how important we are?' For example the first of the education reform reports *A Nation at risk* in 1983[1] focused on what needed to happen in education. Was there any mention of libraries in it? No. Both the American Library Association and the National Commission on Libraries and Information Services prepared reports that underscored the importance of libraries to the issues being raised. I remember reading the annual report from NCLIS the following year in which it was stated that *A Nation at risk* had been well received by librarians. I thought, 'Who cares?' Librarians of course were not the right audience for that report.

Indeed, to go in on the defensive after the fact does not ever help. It was said earlier this morning, 'That we are not dealing with a library issue; it may be a social justice issue, it may be an economic development issue, it may be an educational reform issue, but we are not talking about a library issue'. Which means — among other things — that we need to be outside our libraries aggressively contributing to solutions. Even if we were initially overlooked.

Robert Greenleaf, a corporate executive for AT&T for many years, has published a book of essays under the title of *Servant leadership*.[2] His concept is wonderful. He suggests that we should look at the truly greatest leaders of all time (Jesus and Ghandi for example) They were servant leaders; they always saw themselves as people sent to serve others; people willing to give themselves to others. Did they change things? Yes! But it was not by saying 'follow me'; it was by saying 'how can I help you?' That is the model we are talking about with resource based learning. It is the way we can be both serving and at the same time moving people along in their understanding — by seeing ourselves as servant leaders.

Myth number four *Information literacy is only a new term for library instruction*

Let us be honest. Library instruction does not work. Those of you who work at high school level have to teach students everything from scratch, even though the elementary school teacher librarians taught them library skills. When students get to college, have those of you who are academic librarians ever found that most of the students come in truly knowledgeable about library skills? No. Then they get out into the business world and they are still information illiterate; they seldom think about using their public libraries to address job related information problems. Students only remember 17 percent of what they hear in a lecture under the best circumstances; but since in most cases their library lessons have not related to their course grades, they are not going to remember that at all. The issue in information literacy is much more than library instruction; the issue is changing how learning takes place. It is concerned with what happens in the classroom that requires students to use real world resources.

Somebody asked me, 'Why not "do" library instruction and also resource base learning at the same time?' In reality we are going to be in transition period for sometime, but I think we need to be clear in our minds that we are trying to *move beyond* library instruction; but there are reasons why I think it is crucial to emphasise the words 'move beyond'.

- Most people — librarians, teachers, faculty members included — are more comfortable with what they know. If library instruction *is* perceived as roughly equivalent to resource base learning, why should anybody change? Significant change will not occur unless we are convinced that there are pressing reasons to change, and even change will not come easily

- Where are the resources going to come from? If librarians are killing themselves giving a growing number of one hour orientations in the library for courses at the beginning of each semester, how will they have the energy or time to work with faculty members to plan curriculum integration of information resources? In these days of tight budgets there are simply not enough major resources to do both

- Keeping library instruction and resource based learning side by side sends out mixed messages. We need to be modeling what we think is good learning. If we are lecturing to classes of students all the time, why is anybody going to listen when *we* say 'You should not be lecturing to students, you should be empowering them to learn.' We need to model what we know about good teaching and learning

I am reminded of an example of this model by a chemistry faculty member at the University of Colorado in Denver, who many years before I met him had bought into the concept of writing across the curriculum. He believed that writing was different from one subject to another and that he had the responsibility, as a chemistry faculty member, to make sure students learned how to write well in the field in addition to subject content. For him information literacy became a very natural add on to that belief. During the time I was involved on that campus he team-taught a chemistry literature course with a librarian. I remember him talking to a group of people, when he told us that the most important thing that his students learned was seeing him learn from the librarian — before their very eyes; and seeing the librarian learn from him — before their very eyes. They were learning that nobody knows it all, and that they should in fact, be learning throughout their lives. There is a real danger in holding onto library instruction because it does not model what we are promoting in terms of educating people for today's information society.

If you ask me whether library instruction and resource based learning can exist side by side indefinitely, my answer is no. But it will always be the newer, more demanding model which will lose out.

Does that mean that librarians should immediately tell all teachers that they will never give library instruction lessons again? No. But they should start nudging them onto the next stage. Librarians should encourage the faculty members who have been happy with their library instruction classes for years to try something new the next time; suggesting that there is another way to empower students, by moving towards a model of resource based learning.

Myth number five *Information literacy can be generic*

There is no such thing as generic information literacy. It has to be contact specific and subject specific.

There are some exceptions. We have been focusing on the school setting but if information literacy really works, the real impact is going to be on public libraries; they also need to be a partner in this movement. There has been some interesting research done with citizen action groups by Joan Durrance[3] who is at the School of Information and Library Studies at the University of Michigan. She interviewed community leaders who wanted to facilitate change in their communities. Questions were asked about their information needs within the last six months. She asked them where and how, if they did, obtain the information they needed. Some of them mentioned using libraries and some of them never used libraries. She also found that there were a number of things the people who use libraries had in common. The one with the strongest correlation, was that they knew a librarian by name. I think that has a lot of implications for how we go about resource base learning. One of the most important resources that students need to learn about is *you*. You are the experts in things called libraries that can help them for the rest of their lives. People need to learn that any time they have a new information need or a new problem, librarians can help them identify and pull together the information from a variety of sources. I think then there are a few generic, and very important things, that people should learn as part of information literacy skills that do go beyond the situational and subject specific.

Myth number six *There is no time in my course for extra content*

This is the one of the myths you will encounter with teachers and faculty members. Everytime I speak with a group of classroom educators I am told there is not enough time. There is so much content the faculty feel must be covered and there is no way they can include information literacy across the curriculum. 'My students have to be prepared for this test', or 'They must cover all this material to be prepared for other courses they are taking'. At face value they are absolutely right but the question must be raised whether this is the best use of their students' time in terms of the long term benefits. Faculty must think about the problems inherent in students remaining information dependent on them. Are faculty willing to give students their home telephone number so that for the rest of their students' lives they can call every time they have a job change? Or are faculty willing to put material on reserve in public libraries across the country (in America we are a very mobile population) to help their former students keep up to date? Always start such discussions with the premise that the reason faculty care about covering so much content is because they care about their students. Then you just need to help them understand that, because they really care, they must make the change.

You can give faculty some helpful hints. I heard a professor on my campus say to another faculty member who said, 'I do not have time to do essays, (which of course meant there was also no time for developing information literacy skills), with 20 students in my class, I cannot do that.' The professor said, 'You do have time if you think about what you are doing with the essays. Are you spending time correcting grammar? Are you spending time correcting spelling? Do away with that time by requiring your students to put their papers through spell checks and grammar checks in the computer lab. Then you will have more time to concentrate on the meaningful things such as their critical thinking and information literacy abilities.' There is always time to do what needs to be done to accomplish teaching priorities. Part of *your* job in resource based learning is helping faculty and teachers to understand what options they have to accomplish *their* class priorities.

Myth number seven *Classes are too large*

The most sacred thing in compulsory education is keeping class sizes small, and even colleges like to boast about their small student/faculty ratios. However this does not necessarily equate with quality. The research indicates otherwise. When there is a great diversity of students quality education requires that good alternatives are available to students in any class size. And resource based learning is one of the most powerful tools that teachers have. If some students can go to the library for advanced research while the teacher concentrates with a smaller group of students who need more support, and if the students can use different kinds of media to reinforce their learning options, greater individual progress can be made by all students. However these are not options with which most teachers have had experience. Starting at the point of their needs will need *your* help in understanding how resource based learning can help them address the challenges at hand.

Myth number eight *We are expecting too much of our students*

I have heard this myth here in Australia and it is often raised in America too. It is not only the good students who can do research and participate effectively in resource base learning. Talk with people who are in schools where resource based learning is happening and they will tell you that the students who initially do not like this methodology are the smart students. Under traditional practices better students never needed to invest much energy at school. *With resource based learning they are being challenged and must become actively involved.* Meanwhile, students who were previously seen as being slower or being not so bright, begin to experience success, gain self confidence and to know they have something to contribute. Resource based learning can and does a lot to level the playing field because it is responsive to preferred learning styles and it keeps everybody challenged at an appropriate level. There are also indicators, although we need more research in this area, that resource based learning also positively impacts on school attendance and retention rates.

These are the teaching myths that you may need to address in working with teachers and faculty — there is not enough time; classes are too large; only bright students benefit. Be sure you are ready to respond for they are legitimate, but unnecessary concerns.

Targets and partners

There is so much that can be done in initiating information literacy efforts that one of the real dangers is getting bogged down by trying to do too much and/or trying to take advantage of every opportunity that presents itself in your lap. The alternative is to take a hard look at who or what are your best *targets* for effort.

- We are never going to win everybody over to restructuring the learning process into a resource based learning approach. Moreover, given the proportion of librarians to faculty members on any campus with which I have ever been associated, if every faculty member wanted to become involved in resource based learning, librarians would collapse under the workload. So, target people. Whom do you target? On every campus there are some faculty and some departments that are more influential than others. Among those select faculty who have some openness, some predilection, to this sort of learning. *If someone does not respond positively, go on to somebody else.*

- *Target needs and significant changes.* The arrival of a new faculty member, a re-examination of university requirements, a state mandate, even a budget cut can create a sense of need and therefore a window of opportunity to target. As an example at my own campus at Towson State University, a number of part time faculty members were released because of budget cuts. Senior faculty members were then required to teach introductory courses rather the electives they preferred. All of a sudden there was an openness on their part to explore how information technology could help cover the introductory courses while allowing them to do what they really wanted to do. Alternatively, faculty members may be concerned because in order to offer needed multiple sections every semester so many part time faculty members must be hired that there is a concern about the overall quality or consistency of the material being covered. We talked to faculty members about what we had to offer that could help address that need.

  Towson University is currently re examining our general university requirements for compulsory courses. I was appointed as an ex officio member to the revision group but interestingly enough, I did not bring up the need for information literacy. Faculty members did. I just again gave them the terminology. The University was concerned about lack of research skills and the implications of that for students' success after graduation. Now the need for information management skills is one of the main reasons Towson State University is going to change general undergraduate requirements. *Be smart, look for those windows of opportunities on your campus.*

- In terms of targets at the national or state level you, in Australia, have done a magnificent job in getting information literacy into key national reports and that will make a difference over time. Somebody at this conference related how she took a number of excerpts from the different publications, added some other excerpts from state reports and sent the materials to her principal with her suggestions about how the school could address those challenges. Her principal listened! *Keep targeting major study efforts and other publications.*

- Be sure also to target key people and organisations within the library community. There are key people around — target those who really can make a difference. Make sure that nobody within the library profession is going to have their nose out of joint because they were forgotten. I erred on this point in the United States. The Information Literary Committee report was well received by some of the leadership in the American Library Association, and it was exceedingly well received by nonlibrarians. Since I only have so much time beyond my university responsibilities, which pay my salary, I had to make a decision whether I was going to target the library profession or the nonlibrary groups. I decided that in terms of what would pay off, my energy should go into the nonlibrary groups. Initially I did write annual reports for the ALA which went out to all the ALA counsellors. I stopped when nobody ever responded. That was a mistake because we cannot afford to have educators and business people more interested in information literacy than the very librarians whose support they will need to make it happen. More recently Barbara Ford, a Past President of the Association for College and Research Libraries, has agreed to work with me to publish more information in the library press. The worst thing that could happen would be to get education groups and others excited about resource based learning and then find that librarians have not heard about it! *Target the library community.*

- But, beyond librarians, we also need to target and partner with others at the local, state and national levels. I have, for example, found having a leader who is married to a librarian makes wonderful things possible. Once I suggested that the ALA should start a matchmaking service, target current and future national and state leaders and get them married to librarians! Yet in all seriousness, some of your information literacy evangelism will need to happen socially. Although the major project with which Patricia Knapp[4] was involved failed she had the guts to write it up. More importantly than what her professional efforts accomplished however, was the impact she had on people who became leaders within higher education. I knew one college and one university president, who had known her socially, who wanted a teaching library or some version thereof. Indeed, they did not know exactly what it was, but they remembered that this woman had a vision, for education, and it was an exciting vision to them. So whether it is done as part of having dinner parties or playing golf, we need to build connections that win us the opportunity and the right to share our visions. Often this is easier done apart from our own work situations, so there is no obvious vested interest involved. Be creative; *target key leaders* and get them to understand what information literacy is all about and why it is important.

- Also *target and infiltrate other organisations*. There should be a rule that no librarians are allowed to go to more than one library meeting without going to a nonlibrary meeting in between. We have something to offer that is very important to such organisations. If we are active in those organisations, and part of their committees and programs, we are going to be reaching people who are in leadership positions. Think about targeting organisations by becoming personally involved. It might even be fun for there are some other interesting people in the world besides librarians! I realise however that there is a little bit of fear involved because by now everybody sitting here is a big fish in the moderate size pond called librarianship in Australia. Now I am saying dive into this bigger, at least, different pond, and who knows what dangers may exist there. However librarians know how to network and how to find out what they need to know to move quickly ahead within any organisation. Ultimately we want to get those professional organisations within the information literacy network.

The National Forum on Information Literacy

Let me tell you just a little bit about The National Forum and Information Literacy. When the report was published, one of the recommendations was that there should be a national coalition that would continue the dialogue. The ALA provided some seed money to get it started. All the nonlibrary organisations that were represented on the original committee were considered founding members with two other organisations that had come to the press conference about the report and immediately had been interested. These founding members got together to discuss what this new organisation, the National Forum on Information Literacy should be like and what it should do. On a very unscientific basis we began to discuss what other organisations should be invited to join. This caused me a moment of sheer panic. I had to write to all the groups identified as potential members, where I had no personal contacts and where no one had ever heard of information literacy, to suggest they should join the Forum. My fear was that I might have to go back to the founding members and admit that nobody else was interested.

That did not materialise. At our first meeting we had over twenty organisations in attendance. There were some library organisations, but most of them were outside our field. I thought we would spend the first meeting talking about what information literacy was and whether or not their organisations would want to be involved. I did not think anything much would happen. But the issues raised in the report rang so true to the people there that they were ready to start setting up a strategic plan. Halfway through the meeting events were moving so quickly that I had to ask somebody who had been on the original committee to take some notes!

We originally had thought about setting a national agenda and asking the organisations to work toward it. But fortunately, very quickly, we stumbled on a very different approach, which was the right approach for us. Prior to our third meeting, I met with one of our founding members from the American Association of Colleges for Teacher Education (AACTE). At some point she said, 'Well you know what would really make sense for my association...' She had changed the focus from doing things for the Forum to thinking about how information literacy and resource based learning could support the priorities of the AACTE's membership. Half an hour later we had an action plan for how the AACTE was going to internalise these concepts to the benefit of its membership.

Later, at lunch, the Forum representative from The National Association of Counties (NAC) said the same thing. We had a second action plan. By now it was very clear that this is the way the Forum needed to proceed; for if, in fact information literacy is a means of empowerment, then we needed to practice what we were preaching and see how this concept could be internalised with member organisations to accomplish what they already knew they wanted to do. It is the very same approach as in targeting a teacher or faculty member and asking 'How can the library help you accomplish what you want your students to learn?'

Since then we have explored what is at the heart of these diverse organisations' commitments to information literacy through a formal planning process. We agreed it could be stated simply as the importance of information literacy as a means of individual empowerment. More recently we are coming back to the point where we are beginning to think about working together to raise national awareness about the importance of information literacy. There is no staffing for this organisation. The funds we have are some of that initial money that ALA contributed but this is used for printing more copies of the report and the Forum brochure and postage to our membership. Our strength is in our ability to network and to leverage the efforts of others to promote information literacy.

Our major problem at the moment is success. The nonlibrary organisations would do a lot more if somebody could be there a little more easily to make suggestions to them. As a result I am in the process of trying to recruit some librarians in the Washington DC area to help. Trying to go through the ALA and its bureaucracy with changing leadership every year just does not seem to work. We need people to work with the permanent staff of the Forum organisations who need ongoing liaison support. We need librarians to interact with these people on a monthly basis, to offer program suggestions for their annual conferences etc.

We also keep coming back to the fact that we need more research. We need to have more objective data on student performance related to resource based learning programs. We do not yet know how the Forum can support research except on an individual basis. For example, Forum representatives participated in a doctoral dissertation survey that linked information literacy with the United States' Education Goals.

Another way the Forum has been effective is in concert with library associations' initiatives with nonlibrary organisations. There are times when I have been talking with the executive director of a national organisation while at the same time a library organisation is working with other people in its membership. The organisation is hearing the same thing at two completely different levels. The Forum, of course, has a particular kind of ability, because of its diverse membership, in reinforcing efforts initiated by librarians. This 'pincher' approach has been very effective.

Some advice

- A rallying call is needed to associate information literacy in people's minds. The word 'library' cannot be in it. For the Forum it is 'individual empowerment'. It may be something else in the Australian context, but that is what is at the heart of our concerns

- Remember what it is that comes across loud and clear from principals, teacher and librarians. The word is 'fun'. The bottom line with resource based learning is that it puts the fun back into learning for students and also for teachers and professors. When teachers sit down with the teacher librarian and start planning around a topic such as the weather or pioneers and think about all the different things they can do together, the isolation of the classroom is broken, and that is fun. The students have fun working collaboratively together and the learning outcomes they produce and share with parents and others are also fun. This enjoyment is at the heart of resource based learning; and in today's world it is very important for people to enjoy learning — to enjoy it so much that they want to learn for the rest of their lives. So do not forget the 'fun'.

- If you really believe in the importance of information literacy for social justice, for economic development, for quality education, the bottom line is that you have to let go of controlling the agenda. You have to allow nonlibrarians to get involved with the planning, studying and the setting of priorities. That does not mean that you wash your hands of it, but you have to be brave enough to start with their agendas. The only way information literacy is really going to work is for us to see ourselves as those servant leaders we discussed earlier.

The model where things happen in promoting information literacy is where different sectors come together on an equal footing to plan and work. In Illinois last spring the state organisation for teacher librarians had two conferences. On the first day there were teams of people which were comprised of school superintendents, teacher librarians and public librarians. Among the speakers was a superintendent who stated that while it was not able to be proved that it was resource based learning that was the catalyst for students' improvement on standardised tests, it was the only thing they had changed. This was a real challenge to the superintendents in the audience; and for those who wanted to become serious about resource based learning.

The people at the next day's conference were people from the Illinois Councils of Teachers of English, of Mathematics and of other areas. After short presentations they broke into discussion groups and began talking about what the priorities of the different groups were and how they fitted together with resource based learning. There was much excitement as ideas came together. On both days there was somebody there from the Illinois State Department of Education and about the last thing that was said on the second day was by that person. He was convinced that resource based learning was something that went across all the interests represented at the conference, and that even in the present difficult economic climate, Illinois could find the money to do something.

Some weeks later I spoke at a regional workshop in Cleveland that had been organised by public, school and academic librarians. At least half the audience was made up of teachers, faculty members, community leaders and other nonlibrarians. After some presentations which gave the audience a feeling for what information literacy was about, they broke into small groups to discuss the topic 'What is important to you and how can information literacy help?' The enthusiasm was there because people picked up very quickly how information literacy could help them to do what they already wanted to do. At the end of the day I threw out the challenge — because it was clear that they were going to have another conference — that if they were serious about moving ahead they needed to restructure the planning committee to include people besides librarians. They took me seriously and immediately changed the committee; and people there cared enough to be willing to volunteer their time to serve on it.

Where will you go from here? It seems to me that if our experiences in the United States are valid, it means that you are going to have to share the agenda and the priority setting with other organisations. You will not be giving up leadership, but taking a partnering/servant leadership role to get others talking with you about *their* priorities and how what you have to offer can help them. The important thing is that ownership for information literacy must extend beyond librarians and library organisations.

Can you be comfortable as a change agent, as a catalyst, as a servant leader, but also with not having 51 percent of the vote?

References

1 United States National Commission on Excellence in Education *A nation at risk: the imperative for educational reform: a report to the nation and the Secretary of Education, US Department of Education* Washington The Commission 1983

2 Greenleaf, Robert K *Servant leadership* NY Paulist Press 1977

3 Durrance, Joan *Citizen groups and the transfer of public policy information in a community* Ann Arbor UMI 1980

4 Knapp Patricia B *The Montieth College library experiment* NY Scarecrow Press1966

RECOMMENDATIONS FOR ACTION

The outcome of the workshop sessions was 76 recommendations for action.

The Program Planning Committee and the keynote speakers met on the morning of the final day of the Conference to compile a list of the key recommendations which would provide the basis for future actions. The recommendations were divided into nine themes, subsequently agreed to by the participants as the main arenas for change. The workshop which generated the recommendation is indicated at the end of each statement. Due to the nature of the recommendations there is some duplication within this thematic arrangement. To reflect the sentiment of the conference, this duplication remains below. Reference to the workshop papers and the full list of recommendations from each will provide further context for the suggested actions

Social justice

1. Ongoing consultation between workplace education providers and public/TAFE library professionals to support programs and participants (Carruthers)

2. Recognise the existence of the 'information poor' within the community, and develop particular strategies for specific groups (Nitschke)

3. Extensive examination and debate of the issues of social justice and equity raised by the Multifunction Polis (Middleton)

4. To be effective community consultation must be broadly based limiting the gap between 'information rich' and 'information poor' (Middleton)

Staff Development

1. Ongoing consultation between workplace education providers and public/TAFE library professionals to support programs and participants (Carruthers)

2. Research to establish the best means to bridge the gap between workplace programs and the wider community, and how continuing support from librarians can be made available, for example
    - in the workplace
        - alerting of managers to the presentation of appropriate written material for the workplace
    - in libraries
        - close cooperation between public libraries and workplace education program providers
        - development of an appropriate culture amongst library workers
        - extension of borrowing rights
        - use of dedicated space in public libraries (Carruthers)

3. Design professional development programs on information literacy for delivery in the workplace and in preservice programs especially (Kirk)

4. Information providers and educators recognise the need for broadbased information literacy programs that focus on the needs of their clients (Kirk)

5 Professional organisations such as the Australian Library and Information Association incorporate information literacy sessions into their staff development programs (Kirk)

6 Influence the education system to encourage investigative learning and critical analysis (Gaebler)

7 Convince institutional administrators and academics to integrate information literacy skills into the curriculum (Hegarty)

8 Bring about a change in the librarian's and the library's approach to clients so that the former are perceived as user friendly (Hegarty)

9 Information literacy professionals recognise the prior learning of students and skills of locating and using information (Hegarty)

10 For all library staff

- commitment to information literacy is written into all staff position descriptions and staff development
- provide evidence of understanding and commitment to working with users to facilitate their individual and collective access to and use of information (Cram)

11 Information literacy is part of the common agreed culture of the workplace/institution (Cram)

12 Institutions recognize and assume responsibility for the processes leading to information literate students (Jessup)

13 As teacher education is lifelong, not just three to four year programs, employers of teachers must be influenced to facilitate inservice education, particularly for teachers who were not themselves educated in the context of information literacy (Adey)

14 Attitudes to methods and curriculum are changed to recognise that education is increasingly technology driven and there is a need to prepare materials with which students may interact (Adey)

15 Provide inservice training in information literacy for current teacher educators (Adey)

16 Persuade employers to acknowledge responsibility for providing inservice opportunities for those already in teaching to encounter the concept of information literacy (Adey)

17 Schools recognise the need for information literacy programs and fund appropriate training and development activities (Gapper)

18 School systems provide adequate support (both time and staff) for cooperative program planning and teaching information skills programs (Gapper)

19 Information literacy staff development programs are provided for library staff, lecturers, course designers and writers (Harrison)

20 National, state, local campaigns to implement guidelines for resourcing TAFE libraries (Floyd)

21 Development of partnerships between library and teaching staff at the course implementation level (Floyd)

22 Educate people to continue to be information seekers beyond their time as students (Harlow)

Preservice Training

1 Design professional development programs on information literacy for delivery in the workplace and in preservice programs (Kirk)

2 The Australian Library and Information Association Board of Education and library schools consider the issue of information literacy and the implications for generalist programs of librarianship (Kirk)

3 Influence the education system to encourage investigative learning and critical analysis (Gaebler)

4 Provide inservice training in information literacy for current teacher educators (Adey)

Research

1 Research to establish how workplace education programs can be effectively resourced, including the establishment of standards for workplace education centres, and the provision of better access to libraries for participants in literacy programs (Carruthers)

2 National funding for research to provide more evidence to convince decision makers of the impact of information literacy and its programs (Kirk)

3 Action the recommendation of the Jones report that 'DEET fund a research project into ways that information literacy can be integrated into curricula at all levels of education, including teacher education'[1] (Kirk)

4 Librarians convince the business sector of the value of information literacy (Gaebler)

5 The Australian Council for Libraries and Information Services sponsor a project to simplify and unify library terminology (Cram)

6 Consultation processes be established, which would allow the impact of specific projects and proposals to be evaluated prior to implementation (Cram)

7 Commission research into current practices by which academic staff keep up to date (Adey)

8 A consistent terminology for information literacy is developed in Australia (Gapper)

9 Investigate how information use is dealt with as part of best practice and benchmarking within companies (Cother)

10 Identify the information products (quality and formats) that clients need including tailored services, database searches and scanning (Cother)

Partnerships and networks

1 Ongoing consultation between workplace education providers and public/TAFE library professionals to support programs and participants (Carruthers)

2 Research to establish the best means to bridge the gap between workplace programs and the wider community and how continuing support from librarians can be made available, for example

- in the workplace
  - alerting of managers to the presentation of appropriate written material for the workplace
- in libraries
  - close cooperation between public libraries and workplace education program providers
  - development of an appropriate culture amongst library workers
  - extension of borrowing rights
  - use of dedicated space in public libraries (Carruthers)

3 Establishment of networks for sharing information about, and programs about information literacy ie the Who, the What, the Why and the How of Information Literacy programs (Kirk)

4 Increased cooperation between teaching staff, librarians and students (the learning partners) which will lead to greater transfer of skills and confidence across disciplines (Lupton)

5 Librarians and teaching staff cooperate in the development of learning packages (Hegarty)

6 Alliances are established with nonlibrary administrators, city and religious leaders, educators and linked to the library's marketing and strategic plans (Cram)

7 The Australian Library and Information Association draft a statement acknowledging the equally important roles played in information provision by all types of libraries, and examine mechanisms to enhance networking between all library types and all members of the profession (Cram)

8 Teachers and librarians collaborate to achieve course goals (Jessup)

9 A whole school approach is adopted, where teachers, principals and teacher librarians work together in recognised planning sessions, and statements, policies and procedures to facilitate this move are developed (Gapper)

10 Support structures are established and maintained including resources, flexibility, various delivery options, organisational units, for example libraries, establishment of priorities and cooperation between organisations (Harrison)

11 Identify company information gatekeepers, expand the role of the information specialists and develop information literacy within and between companies ie provision of information and professional publicity, and establish links between the parties (Cother)

12 Promote wider cooperation between public libraries and community information networks to enhance access to all information for the community (Nitschke)

13 Provide mechanisms for community members to input information to the information network (Nitschke)

14 Development of cross sectoral networks to share and support information literacy programs (Floyd)

15 Development of partnerships between library and teaching staff at the course implementation level (Floyd)

16 Develop effective networks amongst information providers, so that their resources are effectively used (Harlow)

17 The MFP act as a focus for emerging technology and the sharing of information (Middleton)

Economic development

1 Librarians need to convince the business sector of the value of information literacy (Gaebler)

2 Investigate how information use is dealt with as part of best practice and benchmarking within companies (Cother)

3 Identify company information gatekeepers, expand the role of the information specialists and develop information literacy within and between the companies, ie provision of information and professional publicity, and establish links between the parties (Cother)

4 Educate people to continue to be information seekers beyond their time as students (Harlow)

Advocacy

1 A shared understanding of roles, responsibilities and expectations between information professionals and educators is fostered (Lupton)

2 A shared understanding of issues and resourcing between information professionals and educators is fostered (Lupton)

3 Communication and interpersonal skills are necessary components of librarians' and teacher librarians' personal characteristics (Lupton)

4 Target and lobby institutional administrators and academics to raise their awareness of what the library has to offer them (Hegarty)

5 Convince institutional administrators and academics to integrate information literacy skills into the curriculum (Hegarty)

6 Alliances are established with nonlibrary administrators, city and religious leaders, educators linked to the library's marketing and strategic plans (Cram)

7 Information literacy is part of the common agreed culture of the workplace/institution (Cram)

8 The Australian Library and Information Association is requested to draft a statement acknowledging the equally important roles played in information provision by all types of

libraries, and examine mechanisms to enhance networking between all library types and all members of the profession (Cram)

9 Institutions recognize and assume responsibility for the processes leading to information literate students (Jessup)

10 As teacher education is lifelong, not just three to four year programs, employers of teachers must be influenced to facilitate inservice education, particularly for teachers who were not themselves educated in the context of information literacy (Adey)

11 Persuade employers to acknowledge responsibility for providing inservice opportunities for those already in teaching to encounter the concept of information literacy (Adey)

12 School systems provide adequate support, both time and staff, for cooperative planning and program teaching information skills programs (Gapper)

13 Promote development of national guidelines for resourcing TAFE libraries and endorsement by the appropriate national group eg MOVEET (Floyd)

14 National, state and local campaign to implement these guidelines (Floyd)

15 All national standards for libraries, commensurate with their responsibilities to support learning outcomes are implemented urgently (Floyd)

Curriculum/methodology change

1 Influence the education system to encourage investigative learning and critical analysis (Gaebler)

2 Skills of information literacy become integral to assessment; explicitly recognised as part of the learning process (Lupton)

3 Librarians and teacher librarians think laterally about resource supply; that teachers are encouraged to consider the resources implications of student assignments (Lupton)

4 Increased cooperation between teaching staff, librarians and students (the learning partners) which will lead to greater transfer of skills and confidence across disciplines (Lupton)

5 Convince institutional administrators and academics to integrate information literacy skills into the curriculum (Hegarty)

6 An increased emphasis in teaching methodologies which acknowledge the importance of information literacy (Jessup)

7 The background, learning context and needs of the student be recognized as an integral part of the information literacy process (Jessup)

8 Attitudes to curriculum are revised to facilitate information literacy (Adey)

9 Attitudes to methods and curriculum are changed to recognise that education is increasingly technology driven and there is a need to prepare materials with which students may interact (Adey)

10 A whole school approach is adopted, where teachers, principals and teacher librarians work together in recognised planning sessions and to facilitate this move statements, policies and procedures are developed (Gapper)

11 An enthusiastic teacher be recruited in each school to support the teacher librarian; to enhance confidence, credibility and school support when resource based learning is initiated (Gapper)

12 Teacher librarians ask teaching staff what their learning principles and goals are, then they can support teachers from the library (Gapper)

13 Information literacy competencies must be explicitly described in terms of learning outcomes, assessment and performance in curriculum documents (Harrison)

14 Models for flexible learning are designed which incorporate information literacy competencies (Harrison)

15 Promote a national, state and local impetus towards a partnership with libraries in curriculum design and development at all levels (Floyd)

16 Identified information literacy learning outcomes are integrated into courses at national and state levels (Floyd)

17 Effective media education programs are available to **all** students in schools and that the tools to read the media critically be taught in context (Biggins)

Supporting informal learning

1 Recognise the existence of the 'information poor' within the community, and develop particular strategies for specific groups (Nitschke)

2 Promote wider cooperation between public libraries and community information networks to enhance access to all information for the community (Nitschke)

3 Supplement technology use by providing access points in key areas of the community (Nitschke)

4 Provide mechanisms for community members to input information to information networks (Nitschke)

5 Need to educate people to continue to be information seekers beyond their time as students (Harlow)

6 Promote the availability of information services to the community (Harlow)

7 Develop effective networks amongst information providers, so that their resources are effectively used (Harlow)

8 Proper resourcing and training occurs to ensure that the general community, from pre-school to senior citizens, has adequate access to media literacy programs (Biggins)

9 Critical awareness of all audiovisual sources of information, especially TV, are considered as an aspect of information literacy (Biggins)

10 Extensive examination and debate of the issues of social justice and equity raised by the MFP (Middleton)

11 To be effective community consultation must be broadly based limiting the gap between 'information rich' and 'information poor' (Middleton)

References

1 Australia. Parliament. House of Representatives Standing Committee for Long Term Strategies *Australia as an information society: the role of libraries/information networks* Canberra AGPS 1991 pxiv recommendation 14

ABOUT THE CONTRIBUTORS

Patricia Senn Breivik

Patricia Senn Breivik holds the position of Associate Vice President for Information Resources at Towson State University, Towson, Maryland. Towson State University is a comprehensive regional university serving approximately 16,000 students. Patricia's position was created to link the University's information resources and services. Her responsibilities include organising, developing and managing units including the library, academic computing services, telecommunications, office automation, satellite systems, telephone and fax systems, and campus wide networking.

Prior to this appointment, she held the position of Director of the Auraria Library at the University of Colorado at Denver (UCD). This position involved maintaining ongoing relations with the chief executives and academic officers at all three institutions and serving on the UCD Academic Deans' Council.

While at the Auraria Library some of Patricia's major accomplishments included the development of an online public access catalogue with other Colorado research libraries, which also serves as the information network for economic development in the greater Denver area; establishment of a mission statement, goals and policy manual; development of the Partnership Program with local businesses; and establishment of a staff development program. In 1981 media services and production were transferred under the control of the library and turned from a troubled faculty services operation into a positive one which expanded into areas of cable, ITFS and satellite transmission. During this period Patricia's professional activities included a national leadership role in the area of libraries and academic excellence through publications, speaking engagements, and service on committees including chairing the American Library Association Presidential Committee on Information Literacy.

Patricia previously served as Dean of Library Services at Sangamon State University and as Assistant dean at Pratt Institute. A former ACE fellow, she is a widely published author and has served on a number of professional committees, including the American Library Association's Presidential Committee on Information Literacy.

Qualifications held by Patricia include BA Brooklyn College, New York, MLS Pratt Institute, Graduate School of Library and Information Science, New York and DLS Columbia University, School of Library Services, New York. Dissertation: The role of library based instruction in the academic success of disadvantaged college freshmen.

Patricia has received numerous awards. They include

- G K Hall Library Literature Award 1990
- American Council on Education Fellows Program service Award 1990
- Columbia University School of Library Service Distinguished Service Award 1989
- American Council of Education Fellow in Academic Administration 1983-84
- US Higher Education Title IIB Fellowships for MLS and DLS
- Outstanding Young Women of America 1973
- 1969 Outstanding Student, Pratt Institute
- Elected to Beta Phi Mu International Library Honor Society 1969

Philip Candy

Phil Candy is associate professor and director of the Academic Staff Development Unit at the Queensland University of Technology in Brisbane. His qualifications include a BCom (1972) from the University of Melbourne in accounting, economics and commercial law; BA (1977), also from the University of Melbourne, in history and geography; MEd (1979) from the University of Manchester in adult education; and EdD (1987) from the University of British Colombia in adult education. He also holds a postgraduate diploma in education (1977) from the University of Adelaide and a postgraduate diploma in adult education (1981) from the University of New England, Australia. In 1985, he received the Coolie Verber Memorial Award for his studies at the University of British Colombia.

Before taking up his present position, Phil was a faculty member in the Department of Administrative and Higher Education Studies at the University of New England, Australia, and previously taught at the then South Australian College of Advanced Education in Adelaide, South Australia. He has worked extensively throughout Asia and Southeast Asia as a consultant, principally in the fields of distance education and learning to learn.

In his research, Phil has investigated primarily the theoretical and conceptual aspects of adult education and constructivist approaches to research and teaching. He has published a number of papers and chapters in books on adult teaching and learning, and a monograph entitled *Mirrors of the mind: Personal construct theory in the training of adult educators* (1981).

His latest book, *Self-direction for lifelong learning* was published last year in the United States. It won the prestigious Cyril Houle World Award for Literature in Adult Education, awarded by the American Association for Adult and Community Education

Kym Adey

Kym is Dean, Faculty of Education, University of South Australia. He is also Chair: Vice Chancellor's Advisory Committee on International relations, Chair, Board of the Joint Centre for Education and Work (a collaborative venture involving the University, the Department of Employment and Technical and Further Education and industry), Chair: Board of CALUSA (Centre for Applied Linguistics — focusing on award courses, language instruction, research and consultancies), Chair, State Chapter of the Australian Council of Deans of Education and executive member of the National Council. Kym has over twenty years experience in higher education, primarily in Australia and the United States. His research and consultancy interests include cognitive development, psychometrics, school management and school discipline

Susan Arthur

Coordinator of the Community Information Support Service of South Australia (CISSSA)

Robert Bean

Robert Bean has been active in English language and literacy teaching for over 17 years, specialising in workplace based education since 1979. He is the coordinator of the Adelaide College of TAFE Workplace Education Service and South Australia's representative of the national consultative group for the Workplace English Language and Literacy (WELL) program. He has written widely on aspects of workforce communication skills training and the relationship between literacy and productivity. He has conducted teacher and industry training in Australia, New Zealand, Canada and the US and has been involved in both policy and curriculum development in this growing field of education

Barbara Biggins

Barbara Biggins currently holds the position of Librarian at the Child, Adolescent and Family Health Services. She has been a longtime campaigner for a healthier viewing environment for children and is currently president of the Australian Council for Children's Films and Television and editor of *Small screen*.

In 1986 Barbara was awarded the Medal of the Order of Australia for service to the arts (particularly through the South Australian Council for Children's Films and Television. In 1989 she was awarded a Churchill fellowship which enabled her to undertake a ten week study tour of the United States and Canada to investigate children's television production and regulations, with particular reference to television violence

Robert Burnheim

Robert Burnheim holds the position of Librarian, Learning Strategies Support with the Library Network Centres of Technical and Further Education, Training and Employment, Queensland (TAFE-TEQ). In this role he works with curriculum designers and college staff to promote and activate the effective use of information resources. Prior to working with TAFE-TEQ he was with the Queensland Department of Education where he worked in the areas of library and resource standards and library automation. Robert holds both teaching and librarianship qualifications. His Masters degree in Curriculum Studies thesis investigated both how primary school students used library catalogues and how the catalogue usage skills were taught

Margaret Carruthers

Margaret Carruthers has been active in the Australian and South Australian literacy field since 1974, specialising in work based programs since 1989. She has published a wide range of student and teacher texts and has written curriculum for literacy courses delivered through the Department of Employment and Technical and Further Education (DETAFE). Margaret is currently a senior teacher in the Workplace Education Service (WES), Adelaide College of TAFE where she is responsible for industrial programs and for teacher materials and curriculum development in the WES unit. She has also been involved in staff development programs for the literacy field. She represented the South Australian Council for Adult Literacy on the Executive of the Australian Council for Adult Literacy during 1991 and 1992

Robert Cother

Bob Cother is a Director of ETHOS Australia PTY Ltd. Formed in September 1991, ETHOS Australia has a number of significant contracts with leading Australian manufacturing companies and government organisations, to implement major cultural change and workplace reform programs.

Prior to this appointment, Bob was Senior Consultant and Deputy Managing Director of the South Australian Centre for Manufacturing where he managed the consulting activities of the Centre, leading a multidisciplinary team of eight consultants and two support staff. His previous positions included senior lecturer in the Manufacturing Engineering department at the Swinburne Institute of Technology, foundation member of the Swinburne Centre for Computer Integrated Manufacture and the Swinburne Centre for Industrial Democracy and systems and industrial engineering positions with the Ford Motor Company. Bob is a registered NIES Total Quality Management consultant and NIES World Competitive Manufacturing facilitator

Rodney Cavalier

Rodney Cavalier is a journalist who holds a number of Commonwealth government part time appointments including Chair, Australian Language and Literacy Council, member of the National Board of Employment, Education and Training, member of the Council of the National Library of Australia and member of the Advisory Council of the Australian Archives.

His previous work and writings have lead to a concern about information and its preservation in documents and other forms. He holds strong views on the importance of the use of multiple sources in making historical judgements

Jenny Cram

Jenny Cram is vice president and President elect 1993 of the Australian Library and Information Association. Since mid June she has been Manager of Library services for the Department of Education, Queensland, a position in which she has responsibility for policies and standards and the provision of quality information services form the Department's nonschool library network as well as line management responsibility for the department's largest corporate libraries. Prior to moving into corporate libraries, Jenny managed public libraries for ten years. She has been an ardent supporter of free public libraries and continues to be an outspoken advocate for barrier free access to library and information services

Bea Donkin

Bea Donkin has worked at Swinburne Institute of Technology for over twenty years during which time she has held the positions of Circulation Librarian, Reference Librarian and for fifteen years was the Reader Education Librarian. She was also the first manager of the library's commercial consultancy, Swinburne Library Information Service. Bea is currently acting Staff Development librarian

Erika Dunstan

Erika Dunstan taught humanities and worked as a welfare officer at a technical school for seven years. She worked as a casual librarian in school and public libraries during and after completion of her profession diploma. She has held the position of Access Librarian at Prahran Campus of Swinburne (previously Prahran College of TAFE) Library since April 1987

Anne Floyd

Anne Floyd currently holds the position of Senior College librarian at Mount Gravatt College of TAFE, Queensland. Previously she was acting User Services Librarian, TAFE Library Network Centre, TAFE-TEQ and prior to that was Manager Resource Services, Redland Community College. In 1991 she was awarded a Queensland Employment and Vocational Education and Training scholarship to travel to Europe to research the implications of competency based training on library services

Jan Gaebler

Jan Gaebler has a background in journalism and public relations. She currently holds the position of Research Librarian and Information Manager at the State Bank of South Australia. She takes an active role in professional activities and is a general councillor on the national council of the Australian Council for Libraries and Information Services

Sandra Gapper

Sandra Gapper currently holds the position of Manager of Adelaide West Teacher and Student Support Centre, Library and Information Services. Prior to this appointment she has worked both as a classroom teacher and a teacher librarian in metropolitan and country schools. Sandra has also held the positions of project Officer, Curriculum Directorate, Resource Based Learning and Manager, Partners in Learning Project

Carolyn Gerhardy

Carolyn Gerhardy is Chairperson of the Community Information Networkers of South Australia and Community Information Coordinator, SWAP (the cooperative of the St Peters, Prospect and Walkerville public libraries)

Marilyn Harlow

Marilyn Harlow is Advocacy and Research Manager at the Small Business Corporation of South Australia. The Corporation's role is to provide advice, information and other resources for the small business sector. She has particular responsibilities for identifying issues of interest and concern to small business owners and communicating these to government. She works with business owners who have problems at local and state level and mediates discussion with state agencies. her second area of focus is in the facilitation of appropriate small business management training courses. Marilyn has previously owned and managed businesses of her own including an enquiry agency, floristry and appliance repairs. She originally graduated as a teacher and has postgraduate qualifications in business administration

Chris Harrison

Chris Harrison Associate Director, Regency College of TAFE has worked with DETAFE for sixteen years in a variety of capacities in the area of educational delivery and learning resource management. One of the challenges of her current position is to reform approaches to learning delivery, particularly to introduce information literacy into the learning delivery rational of the college. Her previous positions have involved the provision of leadership, advice and consultancy to colleges and teaching program areas on curriculum implementation strategies. Chris has a particular concern to ensure that in the curriculum design, development and delivery processes both the learning resource management and learning skill implications are appreciated and accommodated

Fran Hegarty

Fran Hegarty worked as a geography/economics teacher in three states before undertaking a librarianship qualification in 1977. Since then she has worked as a librarian in both the higher education and TAFE sectors prior to taking up the position as Swinburne Librarian in 1992

Ursula Hickey

Ursula Hickey is Reader Services and Community Information Librarian at the Burnside Public Library in South Australia

Rose Humphries

Rose Humphries has worked in academic and public libraries in England, New Zealand and Australia. She was Manager of Prahran College of TAFE Library from 1982 to 1992 and is currently Campus Librarian, Prahran Campus, Swinburne University of Technology

Christine Jessup

Christine Jessup is Academic Adviser, Language and Learning Unit at The Flinders University. As a teacher she has always been interested in how students make sense of their learning environment. She has taught a wide variety of students in Australia and overseas. She is primarily interested in students language development and in a university setting this also means assisting students develop their use

Joyce Kirk

Joyce Kirk is Head, School of Information Studies at the University of Technology, Sydney. Her experience in education for information professionals includes previous appointments at Riverina College of Advanced Education, Library Services in the New South Wales department of Education and at Kuring-gai College of Advanced Education. Joyce's research interests in information science are based on information need and use, the design of information products and services, and education for the information professional. She is actively involved in professional associations and is Deputy Chair, Board of Education, Australian Library and Information Association

Paul Lupton

Since 1989 Paul Lupton has held the position of lecturer in the School of Language and Literacy Education at the Queensland University of Technology. His lecturing centres on the integration of the educational role of the teacher librarian and on the use of information services applicable to schools. He is currently researching conditions in primary schools which support the infusion of information technology into school library resource centres for his Master of Education thesis. Paul is a member of the Australian School Libraries Association/ALIA Policy and Guidelines Document Reference group which is overseeing the writing of a set of guidelines to assist decision makers in developing appropriate policies and guidelines for school library resource services

Philippa Middleton

Philippa Middleton is a freelance consultant specialising in libraries and information services, local government and education. Previously she was manager Noarlunga Library Services, a joint venture between the City of Noarlunga and the SA Department of Employment and Technical and further Education. She is interested in cooperative ventures and networks, the future of information services, technology and the multitude of reasons why, and ways in which, people use information

Jill Miller

Jill Miller was a reference librarian in university libraries in New Zealand. Since her arrival in Australia she has worked with migrant services and as a teacher librarian in secondary schools. Her current position is Adult Services Librarian at the Unley Library Services. She is convener of the Business Resources in Local Libraries (BRILL) Working Party

Gerry Mullins

Gerry Mullins is Deputy Director of the Advisory Centre for University Education at the University of Adelaide. The Centre provides professional development for academic staff and language and learning support for students. Gerry is interested in student learning, especially in problem based curricula, and in the evaluation of academic performance at both individual and departmental levels

Janice Nitschke

Janice Nitschke is President of the Chief Librarians Association of South Australia and Manager, Library and Information Services, Millicent Public Library. Janice is also a member of the Libraries Board of South Australia

Ray Price

Ray Price has a background in chemistry and academia. He is Information Manager at SOLA International, a world leader in the manufacture of optical lens and business best practice

Judy Styles

Judy Styles is a teacher librarian and Australian Studies teacher at Aberfoyle Park High School. In this capacity she has been instrumental in planning and implementing resource based units of work, integrated into all curriculum areas, which enable students to develop, refine and practice the skills required for information literacy. She has also worked in an advisory capacity assisting a number of other schools to develop similar programs. Recently she has written some exemplar units for Australian Studies which aim to show teachers how to incorporate these skills into their teaching programs and to actively involve students in the learning process. Judy is an active member of the School Libraries Association of South Australia and is editor of the association's newsletter

Ross Todd

Ross Todd is lecturer in the Department of Information Studies, University of Technology, Sydney. His teaching and research fields include user information behaviour, organisation and control of information, and information consolidation. He is researching the impact of information literacy programs in secondary high schools

Participants

Nikki ADAMS	Student Teacher Librarian Charles Sturt University NSW
Kym ADEY	Dean Faculty of Education University of South Australia SA
Maureen ALLMAN	Manager Northern Metropolitan College of TAFE WA
Susan ARTHUR	Coordinator Community Information Support Services SA
Chris AWCOCK	Reference Librarian Flinders University of South Australia SA
Ross BARRETT	Chief Librarian Darwin City Council NT
Bob BEAN	Manager Workplace Education Service Adelaide College of TAFE SA
Barbara BIGGINS	Librarian Child, Adolescent and Family Services SA
Barbara BLACOE	Senior Liaison Librarian University of South Australia SA
Adrienne BODROGHY	Library Assistant Distance Education University of South Australia SA
Di BOOKER	User Services Librarian Adelaide College of TAFE SA
Patricia Senn BREIVIK	**Keynote speaker** Associate Vice President Information Resources Towson State University Maryland USA
Heather BROWN	Lecturer Adelaide College of TAFE SA
Susanne BRUHN	Director Outreach National Library of Australia ACT
Alan BUNDY	University Librarian University of South Australia SA
Judith BUNDY	Metropolitan Vice President South Australian Association of School Parents' Clubs SA
Margaret BURDEN	Teacher Librarian Mercedes College SA
Pauline BURGER	Liaison Librarian University of South Australia SA
Marie BURY	Teacher Librarian Gawler High School SA
Sharon CALLEN	Classroom Teacher Pembroke Junior School SA
Lorraine CAMPBELL	Teacher Librarian Annesley College SA
Philip CANDY	**Keynote speaker** Associate Professor and Director Academic Staff Development Unit Queensland University of Technology QLD
Catherine CAON	Teacher Librarian Urrbrae Agricultural High School SA
Eva CAPRILE	Information/Publicity Officer Women's Information Switchboard SA
Margaret CARRUTHERS	Senior Teacher Workplace Education Service Adelaide College of TAFE SA
Rodney CAVALIER	Chair Australian Language and Literacy Council Canberra ACT
Claire CLARK	Associate University Librarian University of South Australia SA
Lee CLARK	Teacher Librarian Prince Alfred College SA
Peter CLAYTON	Director Library and Information Studies University of Canberra ACT
Margaret COLMER	Student University of South Australia SA
Mary COLLINS	Teacher Librarian Salisbury High School SA
Vikki COOKE	Regional Librarian Brisbane City Council Library QLD
Robert COTHER	Director ETHOS Australia Pty Ltd Adelaide SA
Rose COUNSEL	Liaison Librarian Victoria University of Technology VIC
Jenny CRAM	Manager Library Services Department of Education QLD
Laura CRAM	Lecturer School of Library and Information Management University of South Australia SA
Liz CRAWFORD	Senior Librarian Adult Migrant Education Services SA
Julia DANVERS	Student University of South Australia SA
Judy DE BOO	Liaison Librarian University of South Australia SA
Anne DE NICOLO	Teacher Librarian Sienna College SA
Bea DONKIN	Acting Staff Development Librarian Swinburne University of Technology VIC
Irene DOSKATSCH	**Conference Convener** Liaison Librarian University of South Australia SA
Jill DUFFIELD	Coordinator Resourced Based Learning Oakbank Area School SA
Carole DUFFILL	Social Sciences Librarian University of Western Australia WA
Lynelle DUNN	Acting Senior Librarian Department of Education and the Arts TAS
Erika DUNSTAN	Access Librarian Swinburne University of Technology VIC
Andrew DUTNEY	Senior Lecturer Parkin-Wesley Theological College SA
Wendy EDWARDS	Teacher Librarian Richmond Primary School SA
Roly EIME	Senior Liaison Librarian University of South Australia SA
Ninette ELLIS	Reader Education Librarian University of Adelaide SA
Gordon EVANS	Librarian Regency College of TAFE SA
Anne FLOYD	Senior College Librarian Mt Gravatt College of TAFE QLD
Pauline FOUNTAIN	Librarian The Flinders University of South Australia SA

Katherine FOWLER	Librarian Department of Primary Industry SA
Kylie FOX	Lecturer University of South Australia SA
Jan GAEBLER	Librarian State Bank of South Australia SA
Sandra GAPPER	Manager Adelaide West Library and Information Services SA
Helen GARWOOD	Branch Librarian Mitcham Public Library SA
Joanna GEHLING	Librarian Adelaide College of TAFE SA
Carolyn GERHARDY	Community Information Coordinator St Peters, Walkerville and Prospect Public Libraries SA
Judy GIBB	Liaison Librarian University of South Australia SA
Andrew GILCHRIST	Librarian The Orphanage Teachers Centre SA
Sandy GRAY	Liaison Librarian University of South Australia SA
Jenni GROSSI	Manager Early Childhood Resource Centre SA
Lesley GUSTER	Teacher Librarian Heathfield High School SA
Kathryn HAESE	Children's Librarian Noarlunga Library SA
Vivenne HAND	Deputy Principal St Peters Glenelg Anglican Grammar School SA
Marilyn HARLOW	Manager Research Small Business Corporation SA
Melanie HARRIS	Deputy Manager Tea Tree Gully Public Library SA
Sandra HARRIS	Lecturer Eyre College of TAFE SA
Chris HARRISON	Associate Director Regency College of TAFE SA
Kay HATHWAY	Information Manager Trade Union Training Authority VIC
Susan HAZEL	Teacher Librarian Moonta Community Library SA
Anne HAZELL	Head Bibliographic Support Services The Orphanage Teachers Centre SA
Fran HEGARTY	Librarian Swinburne University of Technology VIC
Ursula HICKEY	Reader Services and Community Information Librarian Burnside Public Library SA
Lucy HILL	Librarian Sydney Institute of Technology NSW
Jane HISCOCK	Research Librarian University of South Australia SA
Rose HUMPHRIES	Campus Librarian Swinburne University of Technology VIC
Margaret HUNT	Manager Learning Resource Centre Elizabeth College of TAFE SA
Sherron HUNTER	Liaison Librarian University of South Australia SA
Peter HYLTON	Manager State Information SA
Ed IRONS	Academic Adviser Language and Learning Unit The Flinders University of South Australia SA
Catherine IRVING	Legal Information Officer Marion Community Centre SA
Helen JACKSON	Librarian Croydon Park College of TAFE
Kay JAMES	Liaison Librarian University of South Australia SA
Christine JESSUP	Academic Adviser The Flinders University of South Australia SA
Maree JOLLY	Lecturer University of South Australia SA
Maureen KEANE	Lecturer University of South Australia SA
Marion KEARNS	Information Services Coordinator University of Technology, Sydney NSW
Fran KELLY	Project Officer Resource Based Learning Department of Education SA
Joyce KIRK	Head School of Information Studies University of Technology, Sydney NSW
Valerie KUPKE	Lecturer University of South Australia SA
Yvonne LADD	Librarian Adelaide College of TAFE SA
Susan LARCOMBE	Teacher Librarian Mercedes College SA
Elizabeth LAYTON	Senior Librarian Lending Services ACT Institute of TAFE ACT
Vicki LEDO	Senior Librarian University of South Australia SA
Dean LEITH	Associate Librarian University of Western Sydney NSW
Trixie LIPSCOMBE	Librarian Adelaide College of TAFE SA
Vanessa LITTLE	Library Services Manager City of Henley and Grange SA
Adela LOVE	Distance Education Librarian University of South Australia SA
Lyndall LUSH	Lecturer University of South Australia SA
Paul LUPTON	Lecturer School of Language and Literacy Education Queensland University of Technology QLD
Anne Marie LYNCH	Liaison Librarian University of South Australia SA
Mary MACAULAY	Albury Library Director Charles Sturt University NSW
Rosemary McCONNELL	Librarian Victorian College of Agriculture and Horticulture VIC
Karen McDOWALL	Librarian Elizabeth College of TAFE SA
Shane McGARTY	College Librarian Whyalla College of TAFE SA

Margaret McKENZIE	Manager Adelaide North Eastern Teacher & Student Library and Information Service SA
Alan McKIE	Associate University Librarian University of South Australia SA
Bonnie MARRIOTT	Librarian in charge Alice Springs College of TAFE NT
Annette MASTERS	Cataloguing Librarian University of South Australia SA
Anne MATHER	Liaison Librarian University of South Australia SA
Pauline MEYERS	Manager Learning Resource Centre Norwood Centre Adelaide College of TAFE SA
Philippa MIDDLETON	Management Consultant SA
Carol MILLER	Teacher Librarian Hamilton Secondary School Mitchell Park SA
Jill MILLER	Adult Services Librarian Unley Library Service SA
Angela MOORES	Librarian The Orphanage Teachers Centre SA
Peter MORRIS	Literacy Coordinator Prince Alfred College SA
Linda MULHERON	Chief Librarian Westmead Hospital SA
Gerry MULLINS	Associate Director Advisory Centre for University Education University of Adelaide SA
Claire MURPHY	Lecturer Learning Resources Tea Tree Gully College of TAFE SA
Jill NASH	Student University of South Australia SA
Tatiana NETCHPAI	Regional Librarian Brisbane City Council Library QLD
Peter NEWNHAM	Subject Librarian University of Adelaide SA
Janice NITSCHKE	Chief Librarian Millicent Public Library SA
Victoria OLENICH	Teacher Librarian Seaton North Primary School SA
Liz OSMAN	Librarian School of Aboriginal Education Adelaide College of TAFE SA
Peter O'TOOLE	Librarian St Michaels College SA
Leonie OVERELL	Lecturer Department of Information Services Royal Melbourne Institute of Technology VIC
Richard OWEN	Head Learning Resource Centre Adelaide College of TAFE SA
Suzanne PAGE	Teacher Librarian Murray Bridge High School SA
Beverley PARKER	Liaison Librarian University of South Australia SA
Margaret PASCOE	Librarian The Orphanage Teachers Centre SA
Heather PEARCE	Teacher Librarian Pembroke Senior School SA
Gerard PEGUERO	Deputy University Librarian Royal Melbourne Institute of Technology VIC
Simon PENHALL	Student Programs State Library of South Australia SA
Pia PILCHER	Lecturer Learning Resources Adelaide College of TAFE SA
Pamela PIPER	Executive Office School Libraries Services Department of Education &Training ACT
Ray PRICE	Information Manager SOLA International SA
Beth PRIOR	Manager Learning Resource Centre Barker College of TAFE Murray Bridge SA
Jenny QUILLIAM	Student University of South Australia SA
Andrea RANKIN	Reference Librarian University of South Australia SA
Naomi RICE	Chief Librarian Unley Library Service SA
Sue RICHMOND	Teacher Librarian Wilderness College SA
Bill ROACH	City Librarian Port Adelaide SA
Sherrie RUTTER	Liaison Librarian University of South Australia SA
Catherine RYMILL	Librarian South East College of TAFE SA
Irene SACHS	Senior College Librarian Ipswich College of TAFE QLD
John SALTER	Lecturer Australian Counter Disaster College VIC
Jennifer SCOBIE	Assistant University Librarian (Reader Services) University of Newcastle NSW
Elizabeth SCHOFIELD	Librarian Department of Employment and TAFE SA
Jean SIRONA	Librarian Adelaide College of TAFE SA
Yasotha SIVANESARAJAN	Marist Sisters' College NSW
John SLOAN	Librarian The Orphanage Teachers Centre SA
Anne SMART	Librarian Adelaide College of TAFE SA
Kate SMITH	Teacher Pembroke Junior School SA
Kerry SMITH	Lecturer School of Information and Library Studies Curtin University of Technology WA
Wendy SPURRIER	Liaison Librarian University of South Australia SA
Nancye STANELIS	Manager Learning Resources Tea Tree Gully College of TAFE SA
Judy STYLES	Teacher Librarian Aberfoyle Park High School SA
Geoff SWADLING	Liaison Librarian University of South Australia SA

Pam SYMONDS	Business Education Senior Teacher Salisbury East High School SA
Jennifer TAYLOR	Assistant Executive Officer National Library of Australia ACT
Anthea THOMAS	Reference Librarian Distance Education University of South Australia SA
Eveline TINDALE	Senior Project Officer Family and Community Services SA
Ross TODD	Lecturer Department of Information Studies University of Technology, Sydney NSW
David WARDLE	Manager Library Services ACT Library Service ACT
Robina WEIR	Lending Services Librarian University of Adelaide SA
Mary WEST	Education Officer School Libraries Northern Territory Library Services NT
Lawrie WHITMORE	Coordinator Library and Resource Based Learning Salisbury East High School SA
Janet WILKINSON	Manager Reader Services State Library of South Australia SA
Erica WILLIAMSON	Librarian The Flinders University Medical Library SA
Caroline WOOD	Librarian Adelaide College of TAFE
Linda WORRALL-CARTER	Lecturer Royal Melbourne Institute of Technology VIC
Lynne WRIGHT	Faculty Librarian Informatics Wollongong University NSW
Meredith WRIGHT	Teacher Librarian Glenunga International School SA

Program

8.00-5.00 REGISTRATION DESK OPEN

Day One 2/12/92

9.00 Welcome **Alan Bundy** University Librarian University of South Australia

9.10 Opening address **Professor David Robinson** Vice Chancellor University of South Australia

9.25 Keynote address ***What's it all about*** **Patricia Senn Breivik**

10.25 Housekeeping

10.30 Tea

11.00 Chair: **Jennifer Cram**
Why worry?
Why is information literacy important to our community's economic and social wellbeing?
Rodney Cavalier Chair, Australian Language and Literacy Council

12.00 Lunch

1.30 ***What's the government saying?***
National reports and their implications for information literacy
Anne Hazell Chair, ALIA Board of Education

2.00 ***What's happening***

- Schools **Paul Lupton** Lecturer, School of Language and Literacy, Queensland University of Technology
- Higher education **Gerry Mullins** Assistant Director, Advisory Centre for University Education, University of Adelaide
- TAFE **Chris Harrison** Associate Director, Regency College SA
- Public libraries **Jenny Cram** Manager Library Services, Dept of Education Queensland
- Workplace education **Robert Bean** Manager, Workplace Education Services, Adelaide College of TAFE
- Industry/business **Marilyn Harlow** Manager, Research Small Business Corporation

3.30 Tea

4.00 Questions to the panel

5.00 Finish

Day Two 3/12/92

9.00 Housekeeping
Chair: **John Wolfensberger** Associate Director, Adelaide College of TAFE

9.10 Keynote address ***The learning society***
Philip Candy

10.30 Tea

11.00 Parallel workshops — session 1

12.30 Lunch

1.30 Parallel workshops — session 2

3.00 Tea

3.30 Parallel workshops — session 3

5.00 Finish

7.30 **DINNER — GEOFF'S GOURMECUES BEAUMONT HOUSE 631 GLYNBURN ROAD BEAUMONT**

Day Three 4/12/92

10.00 Housekeeping

10.05 Chair: **Richard Owen**
Establishing the agenda for change

11.15 Tea

11.45 ***What can we learn from the US experience?***
Patricia Senn Breivik

1.00 Lunch

2.00 Taking action

3.00 Launch of the South Australian Forum for Information Literacy

3.30 Finish